

SEQUENCE LISTING

(1) GENERAL INFORMATION

- (i) APPLICANT: Hadlaczky, Gyula
Szalay, Aladar
- (ii) TITLE OF THE INVENTION: ARTIFICIAL CHROMOSOMES, USES THEREOF
AND METHODS FOR PREPARING ARTIFICIAL CHROMOSOMES
- (iii) NUMBER OF SEQUENCES: 34
- (iv) CORRESPONDENCE ADDRESS:
 - (A) ADDRESSEE: Heller Ehrman White & McAuliffe
 - (B) STREET: 4250 Executive Square, 7th Floor
 - (C) CITY: La Jolla
 - (D) STATE: CA
 - (E) COUNTRY: USA
 - (F) ZIP: 92037
- (v) COMPUTER READABLE FORM:
 - (A) MEDIUM TYPE: Diskette
 - (B) COMPUTER: IBM Compatible
 - (C) OPERATING SYSTEM: DOS
 - (D) SOFTWARE: FastSEQ Version 1.5
- (vi) CURRENT APPLICATION DATA:
 - (A) APPLICATION NUMBER:
 - (B) FILING DATE: 28-NOV-2000
- (vi) PRIOR APPLICATION DATA:
 - (A) APPLICATION NUMBER: 08/835,081
 - (B) FILING DATE: 10-APR-1997
 - (C) CLASSIFICATION:
- (vi) PRIOR APPLICATION DATA:
 - (A) APPLICATION NUMBER: 08/695,191
 - (B) FILING DATE: 07-AUG-1996
 - (C) CLASSIFICATION:
- (vi) PRIOR APPLICATION DATA:
 - (A) APPLICATION NUMBER: 08/682,080
 - (B) FILING DATE: 15-JUL-1996
 - (C) CLASSIFICATION:
- (vi) PRIOR APPLICATION DATA:
 - (A) APPLICATION NUMBER: 08/629,822
 - (B) FILING DATE: 10-APR-1996
 - (C) CLASSIFICATION:
- (viii) ATTORNEY/AGENT INFORMATION:
 - (A) NAME: Seidman, Stephanie L
 - (B) REGISTRATION NUMBER: 33,779
 - (C) REFERENCE/DOCKET NUMBER: 24601-402F
- (ix) TELECOMMUNICATION INFORMATION:
 - (A) TELEPHONE: 858-450-8403
 - (B) TELEFAX: 858-587-5360
 - (C) TELEX:

(2) INFORMATION FOR SEQ ID NO:1:

- (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 1293 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: Genomic DNA
 (iii) HYPOTHETICAL: NO
 (iv) ANTISENSE: NO
 (v) FRAGMENT TYPE:
 (vi) ORIGINAL SOURCE:
 (ix) FEATURE:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:

| | | | | | | |
|-------------|-------------|-------------|------------|-------------|-------------|------|
| GAATTCATCA | TTTTTCANGT | CCTCAAGTGG | ATGTTTCTCA | TTNCCATGA | TTTAAAGTTT | 60 |
| TCTCGCCATA | TTCCTGGTCC | TACAGTGTGC | ATTTCTCCAT | TTNCACGTT | TTNCAGTGAT | 120 |
| TTCGTCAATT | TCAAGTCCTC | AAGTGGATGT | TTCTCATTTN | CCATGAATTT | CAGTTTTCTN | 180 |
| GCCATATTCC | ACGTCCTACA | GNGGACATTT | CTAAATTTNC | CACCTTTTTT | AGTTTTCTCTC | 240 |
| GCCATATTTT | ACGTCCTAAA | ATGTGTATTT | CTCGTTTNCC | GTGATTTTCA | GTTTTCTCGC | 300 |
| CAGATTTCCAG | GTCCTATAAT | GTGCATTTCT | CATTTNNCAC | GTTTTTCAGT | GATTTCTGTCA | 360 |
| TTTTTTTCAAG | TCGGCAAGTG | GATGTTTCTC | ATTNNCCATG | ATTNNCAGTT | TTCTTGNAAT | 420 |
| ATTCCATGTC | CTACAATGAT | CATTTTTTAAT | TTTCCACCTT | TTCATTTTTT | CACGCCATAT | 480 |
| TTCATGTCCT | AAAGTGTATA | TTTCTCCTTT | TCCGCGATTT | TCAGTTTTTCT | CGCCATATTC | 540 |
| CAGGTCCTAC | AGTGTGCATT | CCTCATTTTT | CACCTTTTTT | ACTGATTTTC | TCATTTTTTCA | 600 |
| AGTCGTCAAC | TGGATCTTTC | TAATTTTCCA | TGATTTTCAG | TTATCTTGTC | ATATTCCATG | 660 |
| TCCTACAGTG | GACATTTCTA | AATTTTCCAA | CTTTTTCAAT | TTTTCTCGAC | ATATTTGACG | 720 |
| TGCTAAAGTG | TGTATTTCTT | ATTTTCCGTG | ATTTTCAGTT | TTCTCGCCAT | ATTCCAGGTC | 780 |
| CTAATAGTGT | GCATTTCTCA | TTTTTCACGT | TTTTTCAGTG | TTTCGTCATT | TTTTCCAGTT | 840 |
| GTCAAGGGGA | TGTTTCTCAT | TTTCCATGAG | TGTCAGTTTT | CTTGCTATAT | TCCATGTCCT | 900 |
| ACAGTGACAT | TTCTAAATAT | TATACCTTTT | TCAGTTTTTC | TCACCATATT | TCACGTCCTA | 960 |
| AAGTATATAT | TTCTCATTTT | CCCTGATTTT | CAGTTTCCTT | GCCATATTCC | AGGTCCTACA | 1020 |
| GTGTGCATTT | CTCATTTTTT | ACGTTTTTCA | GTAATTTCTT | CATTTTTTAA | GCCCTCAAAT | 1080 |
| GGATGTTTCT | CATTTTCCAT | GATTTTTCAGT | TTTCTTGCCA | TATACCATGT | CCTACAGTGG | 1140 |
| ACATTTCTAA | ATTATCCACC | TTTTTCAGTT | TTTCATCGGC | ACATTTACAG | TCCTAAAGTG | 1200 |
| TGTATTTCTA | ATTTTCAGTG | ATTTTCAGTT | TTCTCGCCAT | ATTCCAGGAC | CTACAGTGTG | 1260 |
| CATTTCTCAT | TTTTTCACGTT | TTTCAGTGAA | TTC | | | 1293 |

(2) INFORMATION FOR SEQ ID NO:2:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 1044 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: Genomic DNA
 (iii) HYPOTHETICAL: NO
 (iv) ANTISENSE: NO
 (v) FRAGMENT TYPE:
 (vi) ORIGINAL SOURCE:
 (ix) FEATURE:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:

| | | | | | | |
|------------|------------|------------|------------|------------|------------|-----|
| AGGCCTATGG | TGAAAAAGGA | AATATCTTCC | CCTGAAAACT | AGACAGAAGG | ATTCTCAGAA | 60 |
| TCTTATTTGT | GATGTGCGCC | CCTCAACTAA | CAGTGTTGAA | GCTTTCTTTT | GATAGAGCAG | 120 |
| TTTTGAAACA | CTCTTTTTGT | AAAATCTGCA | AGAGGATATT | TGGATAGCTT | TGAGGATTTT | 180 |
| CGTTGGAAAC | GGTATTGTCT | TATATAAAAC | CCTAGACAGA | AGCATTCTCA | GAAGCTTCAT | 240 |
| TGGGATGTTT | CAGTTGAAGT | CACAGTGTTG | AACAGTCCCC | TTTCATAGAG | CAGGTTTGAA | 300 |
| AACTCTTTT | TTGTAGTATC | TGGAAGTGGA | CATTTGGAGC | GATCTCAGGA | CTGCGGTGAA | 360 |
| AAAGGAAATA | TCTTCCAATA | AAAGCTAGAT | AGAGGCAATG | TCAGAAACCT | TTTTCATGAT | 420 |
| GTATCTACT | AGCTAACAGA | GTTGAACCTT | CCTTTGAGAG | AGCAGTTTGT | AAACACTCTT | 480 |
| TTTGTGGAAT | CTGCAAGTGG | ATATTTGTCT | AGCTTTGAGG | ATTTCTGTTG | GAAACGGGAT | 540 |
| TACATATAAA | AAGCAGACAG | CAGCATTCCC | AGAACTTCT | TTGTGATGTT | TGCATTCAAG | 600 |
| TCACAGAGTT | GAACATTCCC | TTTCATAGAG | CAGGTTTGAA | ACACACTTTT | TGATGTATCT | 660 |

| | | | | | | |
|------------|------------|------------|-------------|-------------|------------|------|
| GGATGTGGAC | ATTTGCAGCG | CTTTCAGGCC | TAAGGTGAAA | AGGAAATATC | TTCCCTTGAA | 720 |
| AACTAGACAG | AAGCATTCTC | AGAAACTTAT | TTGTGATGTG | CGCCCTCAAC | TAACAGTGT | 780 |
| GAAGCTTTCT | TTTGATAGAG | GCAGTTTTGA | AACACTCTTT | TGTGGAATCT | GCAAGTGGAT | 840 |
| ATTTGTCTAG | CTTTGAGGAT | TTCTTTGGAA | ACGGGATTAC | ATATAAAAAAG | CAGACAGCAG | 900 |
| CATTCCCAGA | ATCTTGTGTT | TGATGTTTGC | ATTCAAAGTCA | CAGAGTTGAA | CATTCCCTTT | 960 |
| CAGAGAGCAG | GTTTGAACAC | TCTTTTATA | GTATCTGGAT | GTGGACATTT | GGAGCGCTTT | 1020 |
| CAGGGGGGAT | CCTCTAGAAT | TCCT | | | | 1044 |

(2) INFORMATION FOR SEQ ID NO:3:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 2492 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Genomic DNA

(iii) HYPOTHETICAL: NO

(iv) ANTISENSE: NO

(v) FRAGMENT TYPE:

(vi) ORIGINAL SOURCE:

(ix) FEATURE:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:3:

| | | | | | | |
|-------------|-------------|-------------|------------|------------|-------------|------|
| CTGCAGCTGG | GGGTCTCCAA | TCAGGCAGGG | GCCCCTTACT | ACTCAGATGG | GGTGGCCGAG | 60 |
| TAGGGGAAGG | GGGTGCAGGC | TGCATGAGTG | GACACAGCTG | TAGGACTACC | TGGGGGCTGT | 120 |
| GGATCTATGG | GGGTGGGGAG | AAGCCCAGTG | ACAGTGCCTA | GAAGAGACAA | GGTGGCCTGA | 180 |
| GAGGGTCTGA | GGAACATAGA | GCTGGCCATG | TTGGGGCCAG | GTCTCAAGCA | GGAAGTGAGG | 240 |
| AATGGGACAG | GCCTTGAGGAT | ACTCTACTCA | GTAGCCAGGA | TAGCAAGGAG | GGCTTGGGGT | 300 |
| TGCTATCCTG | GGGTTCAACC | CCCCAGGTTG | AAGGCCCTGG | GGGAGATGGT | CCCAGGACAT | 360 |
| ATTACAATGG | ACACAGGAGG | TTGGGACACC | TGGAGTCACC | AAACAAAACC | ATGCCAAGAG | 420 |
| AGACCATGAG | TAGGGGTGTC | CAGTCCAGCC | CTCTGACTGA | GCTGCATTGT | TCAAATCCAA | 480 |
| AGGGCCCCCTG | CTGCCACCTA | GTGGCTGATG | GCATCCACAT | GACCCTGGGC | CACACGCGTT | 540 |
| TAGGGTCTCT | GTGAAGACCA | AGATCCTTGT | TACATTGAAC | GACTCCTAAA | TGAGCAGAGA | 600 |
| TTTCCACCTA | TTCGAAACAA | TCACATAAAA | TCCATCTCTG | AAAAAGCCTG | GGGGATGGCA | 660 |
| CTAAGGCTAG | GGATAGGGTG | GGATGAAGAT | TATAGTTACA | GTAAGGGGTT | TAGGGTTAGG | 720 |
| GATCAACGTT | GGTTAGGAGT | TAGGGATACA | GTAGGGTACC | GGTAGGGTTA | GGGGTTAGGG | 780 |
| TTAGGGGTTA | GGGTTAGGGT | TAGGGTTAGG | GTTAGGGTTA | GGGGTTAGGG | GTTAGGGTTA | 840 |
| GGGTTAGGTT | TTGGGGTGGC | GTATTTTGGT | CTTATACGCT | GTGTTCCACT | GGCAATGAAA | 900 |
| AGAGTTCTTG | TTTTTCCTTC | AGCAATTTGT | CATTTTAA | AGAGTTTAGC | AATTCTAACA | 960 |
| GATATAGACC | AGCTGTGCTA | TCTCATTTGT | GTTTTCAATT | GTAACCACAT | TGTGGTTTCA | 1020 |
| ATGTGTTTAC | TTGCCATCTG | TAGATCTTCT | TTGCGTGAGG | TGTCTGTTCA | GATGTGTGTG | 1080 |
| CATTTCTTGN | NTTTNGGCTG | TTTAACTTAT | TGTTTAGTTT | TAATAATTTT | TTATATATTT | 1140 |
| GAAGACAAAT | CTTTCTCAGA | TGTGTATTTG | CAAATATTTT | TTCAATATGA | GGCTTGCTTT | 1200 |
| TGTCTCTAAC | AAGGTCTCTT | CAGAGATAAC | TTAAATATAA | GAAATCCACA | CTGTCAC TTC | 1260 |
| TTTTGTGTAT | ATCTACCTTT | TGTGTCATTT | GTTAAATTC | ATTACCAAAC | CCAAAGGCAG | 1320 |
| ATAGCTTTTC | TTCTATTGTT | TCTTCTAGAA | ATTTGTATAG | TTTTGCATTT | TTAGTGTAAG | 1380 |
| GATGATTTTG | AGTGATTATT | TGTGTAAGTT | GTAAAGTTTT | CGTCTATATC | CATATCATTT | 1440 |
| CTTATGGTTT | CCAATTAATC | GTTCCCTCAC | TATTTTGGG | AAAGACACAG | GATAGTGGGC | 1500 |
| TTTGTTAGAG | TAGATAGGTA | GCTAGACATG | AACAGGAGGG | GGCCTCCTGG | AAAAGGGAAA | 1560 |
| GTCTGGGAAG | GCTCACCTGG | AGGACCACCA | AAAATTCACA | TATTAGTAGC | ATCTCTAGTG | 1620 |
| CTGGAGTGGA | TGGGCACTTG | TCAATTGTGG | GTAGGAGGGA | AAAGAGGTCC | TATGCAGAAA | 1680 |
| GAAACTCCCT | AGAACTCCTC | TGAAGATGCC | CCAATCATTC | ACTCTGCAAT | AAAAATGTCA | 1740 |
| GAATATTGCT | AGCTACATGC | TGATAAGGNN | AAAGGGGACA | TTCTTAAGTG | AAACCTGGCA | 1800 |
| CCATAAGTAC | AGATTAGGGC | AGAGAAGGAC | ATTCAAAAGA | GGCAGGCGCA | GTAGGTACAA | 1860 |
| ACGTGATCGC | TGTCAGTGTG | CCTGGGATGG | CGGGAAGGAG | GCTGGTGCCA | GAGTGGATTC | 1920 |
| GTATTGATCA | CCACACATAT | ACCTCAACCA | ACAGTGAGGA | GGTCCCACAA | GCCTAAGTGG | 1980 |
| GGCAAGTTGG | GGAGCTAAGG | CAGTAGCAGG | AAAACCAGAC | AAAGAAAACA | GGTGGAGACT | 2040 |
| TGAGACAGAG | GCAGGAATGT | GAAGAAATCC | AAAATAAAAT | TCCCTGCACA | GGACTCTTAG | 2100 |
| GCTGTTTAAT | GCATCGCTCA | GTCCCAC TTC | TCCCTATTTT | TCTACAATAA | ACTCTTTACA | 2160 |
| CTGTGTTTCT | TTTCAATGAA | GTTATCTGCC | ATCTTTGTAT | TGCCTCTTGG | TGAAAATGTT | 2220 |
| TCTTCCAAGT | TAAACAAGAA | CTGGGACATC | AGCTCTCCCC | AGTAATAGCT | CCGTTTCAGT | 2280 |

TTGAATTTAC AGAAGTGATG GGCTTAATAA CTGGGGCTCT GACTTTAGTG GTGCAGGAGG 2340
 CCGTCACACC GGGAGCAAGA GTGGCCCTGCE TAGTCCCAT CTGCCCCGAG GTGGGGGCTG 2400
 CCTCGACACT GACAGCAATA GGGTCCGSCA GTCTCCAG CTGCCAGCAG GGGGGGTACG 2460
 ACGACTACAC TGTGAGCAAG AGGGCCCTGC AG 2492

(2) INFORMATION FOR SEQ ID NO:4:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 28 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: Genomic DNA
- (iii) HYPOTHETICAL: NO
- (iv) ANTISENSE: NO
- (v) FRAGMENT TYPE:
- (vi) ORIGINAL SOURCE:
- (ix) FEATURE:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:

GGGGAATTCA TTGGGATGTT TCAGTTGA 28

(2) INFORMATION FOR SEQ ID NO:5:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 29 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: Genomic DNA
- (iii) HYPOTHETICAL: NO
- (iv) ANTISENSE: NO
- (v) FRAGMENT TYPE:
- (vi) ORIGINAL SOURCE:
- (ix) FEATURE:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:5:

CGAAAGTCCC CCCTAGGAGA TCTTAAGGA 29

(2) INFORMATION FOR SEQ ID NO:6:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 47 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: RNA
- (iii) HYPOTHETICAL: NO
- (iv) ANTISENSE: NO
- (v) FRAGMENT TYPE:
- (vi) ORIGINAL SOURCE:
- (ix) FEATURE:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:6:

CCGCTTAATA CTCTGATGAG TCCGTGAGGA CGAAACGCTC TCGCACC

(2) INFORMATION FOR SEQ ID NO:7:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 25 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: Genomic DNA
- (iii) HYPOTHETICAL: NO
- (iv) ANTISENSE: NO
- (v) FRAGMENT TYPE:
- (vi) ORIGINAL SOURCE:
- (ix) FEATURE:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:7:

CGATTTAAAT TAATTAAGCC CGGGC

25

(2) INFORMATION FOR SEQ ID NO:8:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 27 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: Genomic DNA
- (iii) HYPOTHETICAL: NO
- (iv) ANTISENSE: NO
- (v) FRAGMENT TYPE:
- (vi) ORIGINAL SOURCE:
- (ix) FEATURE:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:8:

TAAATTTAAT TAATTCGGGC CCGTCGA

27

(2) INFORMATION FOR SEQ ID NO:9:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 69 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: Genomic DNA
- (D) OTHER INFORMATION IL-2 signal sequence

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:9:

ATG TAC AGG ATG CAA CTC CTG TCT TGC ATT GCA CTA AGT CTT GCA CTT
Met Tyr Arg Met Gln Leu Leu Ser Cys Ile Ala Leu Ser Leu Ala Leu

48

GTC ACA AAC AGT GCA CCT ACT
Val Thr Asn Ser Ala Pro Thr

69

(2) INFORMATION FOR SEQ ID NO:10:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 945 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(vi) ORIGINAL SOURCE:

(ix) FEATURE:

(A) NAME/KEY: Coding Sequence

(B) LOCATION: 1...942

(D) OTHER INFORMATION: Renilla Reinformis Luciferase

(x) PUBLICATION INFORMATION:

PATENT NO.: 5,418,155

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:10:

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AGC | TTA | AAG | ATG | ACT | TCG | AAA | GTT | TAT | GAT | CCA | GAA | CAA | AGG | AAA | CGG | 48 |
| Ser | Leu | Lys | Met | Thr | Ser | Lys | Val | Tyr | Asp | Pro | Glu | Gln | Arg | Lys | Arg | |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | | |
| ATG | ATA | ACT | GGT | CCG | CAG | TGG | TGG | GCC | AGA | TGT | AAA | CAA | ATG | AAT | GTT | 96 |
| Met | Ile | Thr | Gly | Pro | Gln | Trp | Trp | Ala | Arg | Cys | Lys | Gln | Met | Asn | Val | |
| | | | 20 | | | | | 25 | | | | | 30 | | | |
| CTT | GAT | TCA | TTT | ATT | AAT | TAT | TAT | GAT | TCA | GAA | AAA | CAT | GCA | GAA | AAT | 144 |
| Leu | Asp | Ser | Phe | Ile | Asn | Tyr | Tyr | Asp | Ser | Glu | Lys | His | Ala | Glu | Asn | |
| | | 35 | | | | 40 | | | | | | 45 | | | | |
| GCT | GTT | ATT | TTT | TTA | CAT | GGT | AAC | GCG | GCC | TCT | TCT | TAT | TTA | TGG | CGA | 192 |
| Ala | Val | Ile | Phe | Leu | His | Gly | Asn | Ala | Ala | Ser | Ser | Tyr | Leu | Trp | Arg | |
| | 50 | | | | | 55 | | | | 60 | | | | | | |
| CAT | GTT | GTG | CCA | CAT | ATT | GAG | CCA | GTA | GCG | CGG | TGT | ATT | ATA | CCA | GAT | 240 |
| His | Val | Val | Pro | His | Ile | Glu | Pro | Val | Ala | Arg | Cys | Ile | Ile | Pro | Asp | |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 | |
| CTT | ATT | GGT | ATG | GGC | AAA | TCA | GGC | AAA | TCT | GGT | AAT | GGT | TCT | TAT | AGG | 288 |
| Leu | Ile | Gly | Met | Gly | Lys | Ser | Gly | Lys | Ser | Gly | Asn | Gly | Ser | Tyr | Arg | |
| | | | | 85 | | | | | 90 | | | | | 95 | | |
| TTA | CTT | GAT | CAT | TAC | AAA | TAT | CTT | ACT | GCA | TGG | TTG | AAC | TTC | TTA | ATT | 336 |
| Leu | Leu | Asp | His | Tyr | Lys | Tyr | Leu | Thr | Ala | Trp | Leu | Asn | Phe | Leu | Ile | |
| | | | 100 | | | | | 105 | | | | | 110 | | | |
| TAC | CAA | AGA | AGA | TCA | TTT | TTT | GTC | GGC | CAT | GAT | TGG | GGT | GCT | TGT | TTG | 384 |
| Tyr | Gln | Arg | Arg | Ser | Phe | Phe | Val | Gly | His | Asp | Trp | Gly | Ala | Cys | Leu | |
| | | 115 | | | | | 120 | | | | | 125 | | | | |
| GCA | TTT | CAT | TAT | AGC | TAT | GAG | CAT | CAA | GAT | AAG | ATC | AAA | GCA | ATA | GTT | 432 |
| Ala | Phe | His | Tyr | Ser | Tyr | Glu | His | Gln | Asp | Lys | Ile | Lys | Ala | Ile | Val | |
| | | 130 | | | | 135 | | | | | 140 | | | | | |
| CAC | GCT | GAA | AGT | GTA | GTA | GAT | GTG | ATT | GAA | TCA | TGG | GAT | GAA | TGG | CCT | 480 |
| His | Ala | Glu | Ser | Val | Val | Asp | Val | Ile | Glu | Ser | Trp | Asp | Glu | Trp | Pro | |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 | |
| GAT | ATT | GAA | GAA | GAT | ATT | GCG | TTG | ATC | AAA | TCT | GAA | GAA | GGA | GAA | AAA | 528 |
| Asp | Ile | Glu | Glu | Asp | Ile | Ala | Leu | Ile | Lys | Ser | Glu | Glu | Gly | Glu | Lys | |
| | | | | 165 | | | | | 170 | | | | | 175 | | |
| ATG | GTT | TTG | GAG | AAT | AAC | TTC | TTC | GTG | GAA | ACC | ATG | TTG | CCA | TCA | AAA | 576 |
| Met | Val | Leu | Glu | Asn | Asn | Phe | Phe | Val | Glu | Thr | Met | Leu | Pro | Ser | Lys | |
| | | | 180 | | | | | 185 | | | | | 190 | | | |
| ATC | ATG | AGA | AAG | TTA | GAA | CCA | GAA | GAA | TTT | GCA | GCA | TAT | CTT | GAA | CCA | 624 |

| | |
|---|-----|
| Ile Met Arg Lys Leu Glu Pro Glu Glu Phe Ala Ala Tyr Leu Glu Pro | |
| 195 200 205 | |
| TTC AAA GAG AAA GGT GAA GTT CGT CGT CCA ACA TTA TCA TGG CCT CGT | 672 |
| Phe Lys Glu Lys Gly Glu Val Arg Arg Pro Thr Leu Ser Trp Pro Arg | |
| 210 215 220 | |
| GAA ATC CCG TTA GTA AAA GGT GGT AAA CCT GAC GTT GTA CAA ATT GTT | 720 |
| Glu Ile Pro Leu Val Lys Gly Gly Lys Pro Asp Val Val Gln Ile Val | |
| 225 230 235 240 | |
| AGG AAT TAT AAT GCT TAT CTA CGT GCA AGT GAT GAT TTA CCA AAA ATG | 768 |
| Arg Asn Tyr Asn Ala Tyr Leu Arg Ala Ser Asp Asp Leu Pro Lys Met | |
| 245 250 255 | |
| TTT ATT GAA TCG GAT CCA GGA TTC TTT TCC AAT GCT ATT GTT GAA GGC | 816 |
| Phe Ile Glu Ser Asp Pro Gly Phe Phe Ser Asn Ala Ile Val Glu Gly | |
| 260 265 270 | |
| GCC AAG AAG TTT CCT AAT ACT GAA TTT GTC AAA GTA AAA GGT CTT CAT | 864 |
| Ala Lys Lys Phe Pro Asn Thr Glu Phe Val Lys Val Lys Gly Leu His | |
| 275 280 285 | |
| TTT TCG CAA GAA GAT GCA CCT GAT GAA ATG GGA AAA TAT ATC AAA TCG | 912 |
| Phe Ser Gln Glu Asp Ala Pro Asp Glu Met Gly Lys Tyr Ile Lys Ser | |
| 290 295 300 | |
| TTC GTT GAG CGA GTT CTC AAA AAT GAA CAA TAA | 945 |
| Phe Val Glu Arg Val Leu Lys Asn Glu Gln | |
| 305 310 | |

(2) INFORMATION FOR SEQ ID NO:11:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 30 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Genomic DNA

(iii) HYPOTHETICAL: NO

(iv) ANTISENSE: NO

(v) FRAGMENT TYPE:

(vi) ORIGINAL SOURCE:

(ix) FEATURE:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:11:

TTTGAATTC A TGTACAGGAT GCAACTCCTG

30

(2) INFORMATION FOR SEQ ID NO:12:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 30 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Genomic DNA

(iii) HYPOTHETICAL: NO

(iv) ANTISENSE: NO

(v) FRAGMENT TYPE:

(vi) ORIGINAL SOURCE:

(ix) FEATURE:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:12:

TTTGAATTCA GTAGGTGCAC TGTGTGTCAC

30

(2) INFORMATION FOR SEQ ID NO:13:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 1434 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Genomic DNA

(iii) HYPOTHETICAL: NO

(iv) ANTISENSE: NO

(v) FRAGMENT TYPE:

(vi) ORIGINAL SOURCE:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:13:

| | | | | | | |
|------------|-------------|------------|------------|------------|------------|------|
| CCTCCACGCA | CGTTGTGATA | TGTAGATGAT | AATCATTATC | AGAGCAGCGT | TGGGGGATAA | 60 |
| TGTCGACATT | TCCACTCCCA | ATGACGGTGA | TGTATAATGC | TCAAGTATTC | TCCTGCTTTT | 120 |
| TTACCACTAA | CTAGGAAGTG | GGTTTGGCCT | TAATTCAGAC | AGCCTTGGCT | CTGTCTGGAC | 180 |
| AGGTCCAGAC | GACTGACACC | ATTAACACTT | TGTCAGCCTC | AGTGACTACA | GTCATAGATG | 240 |
| AACAGGCCTC | AGCTAATGTC | AAGATACAGA | GAGGTCTCAT | GCTGGTTAAT | CAACTCATAG | 300 |
| ATCTTGTCCA | GATACAACCTA | GATGTATTAT | GACAAATAAC | TCAGCAGGGA | TGTGAACAAA | 360 |
| AGTTTCCGGG | ATTGTGTGTT | ATTTCCATTC | AGTATGTTAA | ATTTACTAGG | ACAGCTAATT | 420 |
| TGTCAAAAAG | TCTTTTTCAG | TATATGTTAC | AGAATTGGAT | GGCTGAATTT | GAACAGATCC | 480 |
| TTCGGGAATT | GAGACTTCAG | GTCAACTCCA | CGCGCTTGGA | CCTGTCGCTG | ACCAAAGGAT | 540 |
| TACCCAATTG | GATCTCCTCA | GCATTTTCTT | TCTTTAAAAA | ATGGGTGGGA | TTAATATTAT | 600 |
| TTGGAGATAC | ACTTTGCTGT | GGATTAGTGT | TGCTTCTTTG | ATTGGTCTGT | AAGCTTAAGG | 660 |
| CCCAAAGTAG | GAGAGACAAG | GTGGTTATTG | CCCAGGCGCT | TGCAGGACTA | GAACATGGAG | 720 |
| CTTCCCCTGA | TATATGGTTA | TCTATGCTTA | GGCAATAGGT | CGCTGGCCAC | TCAGCTCTTA | 780 |
| TATCCACGA | GGCTAGTCTC | ATTGTACGGG | ATAGAGTGAG | TGTGCTTCAG | CAGCCCGAGA | 840 |
| GAGTTGCAAG | GCTAAGCACT | GCAATGGAAA | GGCTCTGCGG | CATATATGTG | CCTATTCTAG | 900 |
| GGGGACATGT | CATCTTTCAT | GAAGGTTTCT | TGTCCTAGTT | CCCTTCCCCC | AGGCAAAACG | 960 |
| ACACGGGAGC | AGGTCAGGGT | TGCTCTGGGT | AAAAGCCTGT | GAGCCTGGGA | GCTAATCCTG | 1020 |
| TACATGGCTC | CTTTACCTAC | ACACTGGGGA | TTTGACCTCT | ATCTCCACTC | TCATTAATAT | 1080 |
| GGGTGGCCTA | TTTGCTCTTA | TTAAAAGGAA | AGGGGGAGAT | GTTGGGAGCC | GCGCCACAT | 1140 |
| TCGCCGTTAC | AAGATGGCGC | TGACAGCTGT | GTTCTAAGTG | GTAACAAAAT | AATCTGCGCA | 1200 |
| TGTGCCGAGG | GTGGTTCTTC | ACTCCATGTG | CTCTGCCTTC | CCCGTGACGT | CAACTCGGCC | 1260 |
| GATGGGCTGC | AGCCAATCAG | GGAGTGACAC | GTCCTAGGCG | AAGGAGAATT | CTCCTTAATA | 1320 |
| GGGACGGGCT | TTCGTTCTCT | CTCTCTCTCT | TGCTTCTCTC | TCTTGCTTTT | TCGCTCTCTT | 1380 |
| GCTTCCCGTA | AAGTGATAAT | GATTATCATC | TACATATCAC | AACGTGCGTG | GAGG | 1434 |

(2) INFORMATION FOR SEQ ID NO:14:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 1400 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Genomic DNA

(iii) HYPOTHETICAL: NO

(iv) ANTISENSE: NO

(v) FRAGMENT TYPE:

(vi) ORIGINAL SOURCE:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:14:

| | | | | | | |
|------------|------------|------------|------------|------------|------------|-----|
| CCTCCACGCA | CGTTGTGATA | TGTAGATGAT | AATCATTATC | AGAGCAGCGT | TGGGGGATAA | 60 |
| TGTCGACATT | TCCACTCCCA | ATGACGGTGA | TGTATAATGC | TCAAGTATTC | TCCTGCTTTT | 120 |
| TTACCACTAA | CTAGGAAGTG | GGTTTGGCCT | TAATTCAGAC | AGCCTTGGCT | CTGTCTGGAC | 180 |
| AGGTCCAGAT | ACAACATGAT | GTATTATGAC | AAATAACTCA | GCAGGGATGT | GAACAAAAGT | 240 |

| | | | | | | |
|------------|------------|------------|-------------|------------|------------|------|
| TTCCGGGATT | GGGTGTTATT | TCCATCCAGT | ATGTTAAATF | TACTAGGGCA | GCTAATTTGT | 300 |
| CAAAAAGTCT | TTTCCAGTAT | ATGTTACAGA | ATTGGATGGC | TGAATTTGAA | CAGATCCCTC | 350 |
| GGGAATTGAG | ACTTCAGGTC | AACTCCACGC | GCTTGGACCT | GTCCCTGACC | AAAGGATTAC | 400 |
| CCAATTGGAT | CTCCTCAGCA | TTTTCTTTCT | TTAAAAAATG | GGTGGGATTA | ATATTATTTG | 450 |
| GAGATACACT | TTGCTGTGGA | TTAGTGTGTC | TTCTTTGATT | GCTCTGTAAG | CTTAAGGCCG | 500 |
| AAACTAGGAG | AGACAAGGTG | GTTATTGCCC | AGGCGCTTGC | AGGACTAGAA | CATGGAGCTT | 550 |
| CCCCTGATAT | ATCTATGCTT | AGGCAATAGG | TCGCTGGCCA | CTCAGCTCTT | ATATCCCATG | 600 |
| AGGCTAGTCT | CATTGCACGG | GATAGAGTGA | GTGTGCTTCA | GCAGCCCGAG | AGAGTTGCAC | 650 |
| GGCTAAGCAC | TGCAATGGAA | AGGCTCTGCG | GCATATATGA | GCCTATTCTA | GGGAGACATG | 700 |
| TCATCTTTCA | AGAAGGTTGA | GTGTCCAAGT | GTCCTTCCTC | CAGGCAAAAC | GACACGGGAG | 750 |
| CAGGTCAGGG | TTGCTCTGGG | TAAAAGCCTG | TGAGCCTAAG | AGCTAATCCT | GTACATGGCT | 800 |
| CCTTTACCTA | CACACTGGGG | ATTTGACCTC | TATCTCCACT | CTCATTAATA | TGGGTGGCCT | 850 |
| ATTTGCTCTT | ATTAAAAGGA | AAGGGGGAGA | TGTTGGGAGC | CGCGCCACA | TTCGCCGTTA | 900 |
| CAAGATGGCG | CTGACAGCTG | TGTTCTAAGT | GGTAAACAAA | TAATCTGCGC | ATGCGCCGAG | 950 |
| GGTGGTTCTT | CACTCCATGT | GCTCTGCCTT | CCCCGTGACG | TCAACTCGGC | CGATGGGCTG | 1000 |
| CAGTCAATCA | GGGAGTGACA | CGTCCTAGGC | GAAGGAAAAAT | TCTCCTTAAT | AGGGACGGGG | 1050 |
| TTTCGTTTTT | TCTCTCTCTT | GCTTCGCTCT | CTCTTGCTTC | TTGCTCTCTT | TTCCTGAAGA | 1100 |
| TGTAAGAATA | AAGCTTTGCC | GCAGAAGATT | CTGGTCTGTG | GTGTTCTTCC | TGGCCGCTCG | 1150 |
| TGAGAACGCG | TCTAATAACA | ATTGGTGCCG | AAACCCGGGT | GATAATGATT | ATCATCTACA | 1200 |
| TATCACACG | TGCGTGGAGG | | | | | 1250 |
| | | | | | | 1300 |
| | | | | | | 1350 |
| | | | | | | 1400 |

(2) INFORMATION FOR SEQ ID NO:15:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 1369 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Genomic DNA

(iii) HYPOTHETICAL: NO

(iv) ANTISENSE: NO

(v) FRAGMENT TYPE:

(vi) ORIGINAL SOURCE:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:15:

| | | | | | | |
|-------------|------------|------------|-------------|------------|-------------|------|
| CCTCCACGCA | CGTTGTGATA | TGTAGATGAT | AATCATTATC | ACTTTACGGG | TCCTTTCACF | 50 |
| ACAACCTGCCA | CGAGGCCCCG | TGCTCTGGTA | ATAGATCTTT | GCTGAAAAGG | CACACACATG | 100 |
| ACACATTACT | CAAGGTGGGC | TCATCTGAGC | TGCAGATTCA | GCTTAATATG | AATCTTGCCA | 150 |
| ATTGTGTGAA | ATCATAAATC | TTCAAAGTGA | CACTCATTGC | CAGACACAGG | TGCCCACCTT | 200 |
| TGGCATAATA | AACAAACACA | AATTATCTAT | TATATAAAGG | GTGTTAGAAG | ATGCTTTAGA | 250 |
| ATACAAATAA | ATCATGGTAG | ATAACAGTAA | GTTGAGAGCT | TAAATTTAAT | AAAGTGATAT | 300 |
| ACCTAATAAA | AATTAAATTA | AGAAGGTGTG | AATATACTAC | AGTAGGTAAA | TTATTTTCATT | 350 |
| AATTTATTTT | CTTTCTTAAT | CCTTTATAAT | GTTTTCTGCT | ATTGTCAATT | GCACATCCAT | 400 |
| ATGTTCAATT | CTTCACTGTA | ATGAAGAAAT | GTAGTAAATA | TACTTTCCGA | ACAAGTTGTA | 450 |
| TCAAATATGT | TACACTTGAT | TCCGTGTGTT | ACTTATCATT | TTATTATTAT | ATTGATTGCA | 500 |
| TTCTTTCGTT | ACTTGATATT | ATTACAAGGT | ACATATTTAT | TCTCTCAGAT | CTTCATTATA | 550 |
| CTCTAACCAT | TTTATAACAT | ACTTTATTTA | TTCATTTCTT | ATGTGTGCTG | TGAGGCACAA | 600 |
| ATGCCAGAGA | GAACCTGAGC | AGATAAGAGG | ACAAATTGCA | AGAGTCAGTT | ACCTCCTGCT | 650 |
| GTTCTCTGGA | AACTCAGGAT | CAAATTCAGG | TTGTCAGGCT | TGGCAGCATG | CACTTTTTCAC | 700 |
| CAGTGCCTCC | ATCTTGCTAG | CCCTGAACAT | CAAGCTTTGC | AGACAGACAG | GCTACACTAA | 750 |
| GTGAACGGT | CATTCACAGC | ATGCATGGTG | ATTTATTGTT | ACTTTCTATT | CCATGCCTTT | 800 |
| ACTATTTCTA | CTAGGTGCTA | GCTAGTACTG | TATTTTCGAGA | TAGAAGTTAC | TGAAAGAAAA | 850 |
| TTACATTGTT | TTCTATAGAT | CCTTGATACT | CTTTCAGCAG | ATATAGAGTT | TTAATCAGGT | 900 |
| CCTAGACCTT | TTCTTCACTC | TTATTAAATA | CTAAGTACAA | ATTAAGTTTA | TCCAAAACAG | 950 |
| TACGGATGTT | GATTTTGTGC | AGTTCTACTA | TGATAATAGT | CTAGCTTCAT | AAATCTGACA | 1000 |
| CACCTATTGG | GAATGTTTTT | GTAAATAAAA | GATTCAGGTG | TTACTCTAGG | TCAAGAGAAT | 1050 |
| ATTAAACATC | AGTCCCAAAT | TACAAACTTC | AATAAAAGAT | TTGACTCTCC | AGTGGTGGCA | 1100 |
| ATATAAAGTG | ATAATGATTA | TCATCTACAT | ATCACAACGT | GCGTGGAGG | | 1150 |

(2) INFORMATION FOR SEQ ID NO:16:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 22118 base pairs

(B) TYPE: nucleic acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Genomic DNA
 (iii) HYPOTHETICAL: NO
 (iv) ANTISENSE: NO
 (v) FRAGMENT TYPE:
 (vi) ORIGINAL SOURCE:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:16:

| | | | | | | |
|------------|-------------|------------|-------------|------------|-------------|------|
| GAATTCCCCT | ATCCCTAATC | CAGATTGGTG | GAATAACTTG | GTATAGATGT | TTGTGCATTA | 60 |
| AAAACCCTGT | AGGATCTTCA | CTCTAGGTCA | CTGTTTCAGCA | CTGGAACCTG | AATTGTGGCC | 120 |
| CTGAGTGATA | GGTCCTGGGA | CATATGCAGT | TCTGCACAGA | CAGACAGACA | GACAGACAGA | 180 |
| CAGACAGACA | GACAGACGTT | ACAAACAAAC | ACGTTGAGCC | GTGTGCCAAC | ACACACACAA | 240 |
| ACACCACTCT | GGCCATAAAT | ATTGAGGACG | TTGATTTATT | ATTCTGTGTT | TGTGAGTCTG | 300 |
| TCTGTCTGTC | TGTCTGTCTG | TCTGTCTGTC | TATCAAACCA | AAAGAAACCA | AACAATTATG | 360 |
| CCTGCCTGCC | TGCCTGCCTG | CCTACACAGA | GAAATGATTT | CTTCAATCAA | TCTAAAACGA | 420 |
| CCTCCTAAGT | TTGCCTTTTT | TCTCTTTCTT | TATCTTTTTT | TTTTTCTTTT | TCTTCTTCCT | 480 |
| TCCTTCCTTC | CTTCCTTCCT | TCCTTCCTTT | CTTCTTTTCT | TTCTTTCTTT | CTTACTTTCT | 540 |
| TTCTTTCCCT | CTTACATTTA | TTCTTTTCAT | ACATAGTTTC | TTAGTGTAAG | CATCCCCTGAC | 600 |
| TGTCTTGAAG | ACACTTTGTA | GGCCTCAATC | CTGTAAGAGC | CTTCCTCTGC | TTTTCAAATG | 660 |
| CTGGCATGAA | TGTTGTACCT | CACTATGACC | AGCTTAGTCT | TCAAGTCTGA | GTTACTGGAA | 720 |
| AGGAGTTCCA | AGAAGACTGG | TTATATTTTT | CATTTATTAT | TGCATTTTAA | TTAAAATTTA | 780 |
| ATTTACCAA | AAGAATTTAG | ACTGACCAAT | TCAGAGTCTG | CCGTTTAAAA | GCATAAGGAA | 840 |
| AAAGTAGGAG | AAAAACGTGA | GGCTGTCTGT | GGATGTCGA | GGCTGCTTTA | GGGAGCCTCG | 900 |
| TCACCATTCT | GCACTTGCAA | ACCGGGCCAC | TAGAACCCGG | TGAAGGGAGA | AACCAAAGCG | 960 |
| ACCTGGAAC | AATAGGTCAC | ATGAAGGCCA | GCCACCTCCA | TCTTGTTGTG | CGGGAGTTCA | 1020 |
| GTTAGCAGAC | AAGATGGCTG | CCATGCACAT | GTTGTCTTTC | AGCTTGGTGA | GGTCAAAGTA | 1080 |
| CAACCGAGTC | ACAGAACAAG | GAAGTATACA | CAGTGAGTTC | CAGGTCAGCC | AGAGTTTACA | 1140 |
| CAGAGAAACC | ACATCTTGAA | AAAAACAAAA | AAATAAATTA | AATAAATATA | ATTTAAAAAT | 1200 |
| TTAAAAATAG | CCGGGAGTGA | TGGCGCATGT | CTTAAATCCC | AGCTCTCTTC | AGGCAGAGAT | 1260 |
| GGGAGGATTT | CTGAGTTTGA | GGCCAGCCTG | GCTGCAAAAG | TGAGTTCCAG | GACAGTCAGG | 1320 |
| GCTATACAGA | GAACCCCTGT | CTTGAAAAC | AAACTAAAT | AACTAAACT | AACTAAAAA | 1380 |
| AATATAAAAT | AAAAATTTTA | AAGAATTTTA | AAAAACTACA | GAAATCAAAC | ATAAGCCCAC | 1440 |
| GAGATGGCAA | GTAAGTGCAA | TCATAGCAGA | AATATTATAC | ACACACACAC | ACACAGACTC | 1500 |
| TGTCATAAAA | TCCAATGTGC | CTTCATGATG | ATCAAATTTT | GATAGTCAGT | AATACTAGAA | 1560 |
| GAATCATATG | TCTGAAAATA | AAAGCCAGAA | CCTTTTCTGC | TTTTGTTTTC | TTTTGCCCCA | 1620 |
| AGATAGGGTT | TCTCTCAGTG | TATCCCTGGC | ATCCCTGCCT | GGAACCTCCT | TTGTAGGTTT | 1680 |
| GGTAGCCTCA | AACTCAGAGA | GGTCTCTCT | GCCTGCCTGC | CTGCCTGCCT | GCCTGCCTGC | 1740 |
| CTGCCTGCCT | GCCTGCCTCA | CTTCTTCTGC | CACCCACACA | ACCGAGTCGA | ACCTAGGATC | 1800 |
| TTTATTTCTT | TCTCTTTCTC | TCTTCTTTCT | TTCTTTCTTT | CTTTCTTTCT | TTCTTTCTTT | 1860 |
| CTTTCTTTCT | TTCTTATTCA | ATTAGTTTTT | AATGTAAGTG | TGTGTTTGTG | CTCTATCTGC | 1920 |
| TGCCTATAGG | CCTGCTTGC | AGGAGAGGGC | AACAGAACCT | AGGAGAAACC | ACCATGCAGC | 1980 |
| TCCTGAGAAT | AAGTGAAAAA | ACAACAAAAA | AAGGAAATTC | TAATCACATA | GAATGTAGAT | 2040 |
| ATATGCCGAG | GCTGTACAGAG | TGCTTTTAA | GGCTTAGTGT | AAGTAATGAA | AATTGTTGTG | 2100 |
| TGTCTTTTAT | CCAAACACAG | AAGAGAGGTG | GCTCGGCCCT | CATGTCGTGT | GTCTGCATGT | 2160 |
| AGACCAGGCT | GGCCTTGAAC | ACATTAATCT | GTCTGCCTCT | GCTTCCCTAA | TGCTGCGATT | 2220 |
| AAAGGCATGT | GCCACCACTG | CCCGGACTGA | TTCTTCTTTT | TTTTTTTTTT | TGGAAAATAC | 2280 |
| CTTTCTTTCT | TTTTCTCTCT | CTCTTTCTTC | CTTCTTCTCT | TTCTTTCTAT | TCTTTTTTTC | 2340 |
| TTTCTTTTTT | CTTTTTTTTT | TTTTTTTTTA | AATTTGCCCTA | AGGTTAAAGG | TGTGCTCCAC | 2400 |
| AATTGCCTCA | GCTCTGCTCT | AATTCTCTTT | AAAAAAAAAAC | AAACAAAAAA | AAAACAAAAA | 2460 |
| CAGTATGTAT | GTATGTATAT | TTAGAAGAAA | TACTAATCCA | TTAATAACTC | TTTTTTCCTA | 2520 |
| AAATTCATGT | CATTCTTGTT | CCACAAAGTG | AGTTCCAGGA | CTTACCAGAG | AAACCCCTGT | 2580 |
| TTCAAATTTT | TGTGTTCAAG | GTCACCCCTG | CTTACAAAGT | GAGTTCCAAG | TCCGATAGGG | 2640 |
| CTACACAGAA | AAACCATATC | TCAGAAAAAA | AAAAAGTTCC | AAACACACAC | ACACACACAC | 2700 |
| ACACACACAC | ACACACACAC | ACACACACAC | ACACACACAG | CGCGCCGCGG | CGATGAGGGG | 2760 |
| AAGTCGTGCC | TAAAATAAAT | ATTTTCTGCG | CCAAAGTGAA | AGCAAATCAC | TATGAAGAGG | 2820 |
| TACTCCTAGA | ACAAACGGGC | TTTTTAATCA | TTCTAGCACT | TTTTTAATTT | GTTTTAATTT | 2880 |
| AACTCTGAAT | TTAGTCTTGG | AAAAGGGGGC | GGGTGTGGGT | GAGTGAGGGC | GAGCGAGCAG | 2940 |
| ACGGGCGGGC | GGGCGGGTGA | GTGGCCGGCG | GCGGTGGCAG | CGAGCACCAG | AAAACAACAA | 3000 |
| ACCCCAAGCG | GTAGAGTGTT | TTAAAAATGA | GACCTAAATG | TGGTGGAACG | GAGGTGCGCG | 3060 |
| CCACCCTCCT | CTTCCACTGC | TTAGATGCTC | CCTTCCCCTT | ACTGTGCTCC | CTTCCCCTAA | 3120 |
| CTGTGCCTAA | CTGTGCCTGT | TCCCTCACCC | CGCTGATTCG | CCAGCGACGT | ACTTTGACTT | 3180 |

| | | | | | | |
|-------------|-------------|-------------|-------------|-------------|-------------|------|
| CAAGAACGAT | TTTGCCCTGTT | TTCACCCGCTC | CCTGTCATAC | TTTCGTTTTTT | GGGTGCCCCGA | 3240 |
| GTCTAGCCCCG | TTCGCTATGT | TCGGGCGGGA | CGATGGGGAC | CGTTTGTGCC | ACTCGGGAGA | 3300 |
| AGTGGTGGGT | GGGTACGCTG | CTCCGTCGTG | CGTGGGTGAG | TGCCGGAACC | TGAGCTCGGC | 3360 |
| AGACCCTCCG | GAGAGACAGA | ATGAGTGAGT | GAATGTGGCG | GCGCGTGACG | GATCTGTATT | 3420 |
| GGTTTGATG | GTTGATCGAG | ACCATTGTGG | GGCGACACCT | AGTGGTGACA | AGTTTCGGGA | 3480 |
| ACGCTCCAGG | CCTCTCAGGT | TGGTGACACA | GGAGAGGGAA | GTGCCTGTGG | TGAGGCGACC | 3540 |
| AGGGTGACAG | GAGGCCGGGC | AAGCAGGCGG | GAGCGTCTCG | GAGATGGTGT | CGTGTTTAAG | 3600 |
| GACGGTCTCT | AACAAGGAGG | TCGTACAGGG | AGATGGCCAA | AGCAGACCGA | GTTGCTGTAC | 3660 |
| GCCCTTTTGG | GA AAAATGCT | AGGGTTGGTG | GCAACGTTAC | TAGGTCGACC | AGAAGGCTTA | 3720 |
| AGTCCTACCC | CCCCCCCCCT | TTTTTTTTTTT | TTTCCTCCAG | AAGCCCTCTC | TTGTCCCCGT | 3780 |
| CACCGGGGGC | ACCGTACATC | TGAGGCCGAG | AGGACGCGAT | GGGCCCCGGT | TCCAAGCCGG | 3840 |
| TGTGGCTCGG | CCAGCTGGCG | CTTCGGGTCT | TTTTTTTTTTT | TTTTTTTTTTT | TTTTCCTCCA | 3900 |
| GAAGCCTTGT | CTGTCTGCTG | CACCGGGGGC | GCTGTACTTC | TGAGGCCGAG | AGGACGCGAT | 3960 |
| GGGCCCCGGC | TTCCAAGCCG | GTGTGGCTCG | GCCAGCTGGA | GCTTCGGGTC | TTTTTTTTTTT | 4020 |
| TTTTTTTTTTT | TTTTTTTCTC | CAGAAGCCTT | GTCTGTCTCG | GTCACCGGGG | GCGCTGTACT | 4080 |
| TCTGAGGCCG | AGAGGACGCG | ATGGGTCTGG | TTCCAAGCCG | ATGTGGCGGG | GCCAGCTGGA | 4140 |
| GCTTCGGGTT | TTTTTTTTTTC | CTCCAGAAGC | CCTCTCTTGT | CCCCGTCACC | GGGGGCGCTG | 4200 |
| TACTTCTGAG | GCCGAGAGGA | CGTGATGGGC | CCGGGTTCCT | GGCGGATGTC | GCCCGGTCAG | 4260 |
| CTGGAGCTTT | GGATCTTTTTT | TTTTTTTTTTT | CCTCCAGAAG | CCCTCTCTTG | TCCCCGTCAC | 4320 |
| CGGGGGCACC | TTACATCTGA | GGGCGAGAGG | ACGTGATGGG | TCCGGCTTCC | AAGCCGATGT | 4380 |
| GGCGGGGCCA | GCTGGAGCTT | TTTTTTTCTC | TTTTTTTCTC | CAGAAGCCCT | CTCTTGTCCT | 4440 |
| CGTCACCGGG | GGCGCTGTAC | TTCTGAGGCC | GAGAGGACGT | GATGGGCCCC | GGTTCGAGGC | 4500 |
| GGATGTGCGC | CGGTCTAGCTG | GAGCTTTGGA | TCATTTTTTTT | TTTTCCCTCC | AGAAGCCCTC | 4560 |
| TCTTGTCCCC | GTCACCGGGG | GCACCGTACA | TCTGAGGCCG | AGAGGACACG | ATGGGCGCTG | 4620 |
| CTTCCAAGCC | GATGTGGCCC | GGCCAGCTGG | AGCTTCGGGT | CTTTTTTTTTT | TTTTTTTCTC | 4680 |
| CAGAAGCCTT | GTCTGTCTGCT | GTCACCCGGG | GCGCTGTACT | TCTGAGGCCG | AGAGGACGCG | 4740 |
| ATGGGCCCCG | CTTCCAAGCC | GGTGTGGCTC | GGCCAGCTGG | AGCTTCGGGT | CTTTTTTTTTT | 4800 |
| TTTTTTTTTTT | TTCTCTCCAGA | AACCTTGTCT | GTCGTGTCTA | CCCGGGGCGC | TTGTACTTCT | 4860 |
| GATGCCGAGA | GGACGCGATG | GGCCCGTCTT | CCAGGCCGAT | GTGGCCCGGT | CAGCTGGAGC | 4920 |
| TTTGATCTTT | TTTTTTTTTTT | TTTCTCTCCA | GAAGCCCTCT | CTTGTCCCCG | TCACCGGGGG | 4980 |
| CACCTTACAT | CTGAGGCCCTA | GAGGACACGA | TGGGCCCCGG | TTCCAGGCCG | ATGTGGCCCC | 5040 |
| GTCAGCTGGA | GCTTTGGATC | TTTTTTTTTTT | TTTTCTTCCA | GAAGCCCTCT | TGTCCCCGTC | 5100 |
| ACCGGTGGCA | CTGTACATCT | GAGGCGGAGA | GGACATTATG | GGCCCGGCTT | CCAATCCGAT | 5160 |
| GTGGCCCCGT | CAGCTGGAGC | TTTGATCTTT | ATTTTTTTTTT | TAATTTTTTTC | TTCCAGAAGC | 5220 |
| CCTCTTGTC | CTGTACCCGG | TGGCACGGTA | CATCTGAGGC | CGAGAGGACA | TTATGGGCCC | 5280 |
| GGCTTCCAGG | CCGATGTGGC | CCGGTCAGCT | GGAGCTTTGG | ATCTTTTTTTT | TTTTTTTTTCT | 5340 |
| TTTTTCTCTC | AGAAGCCCTC | TCTGTCCCTG | TCACCGGGGG | CCCTGTACGT | CTGAGGCCGA | 5400 |
| GGGAAAGCTA | TGGGCGCGGT | TTTCTTTTAT | TGACCTGTCT | GTCTTATCAG | TTCTCCGGGT | 5460 |
| TGTCCAGGTC | GACCAAGTTG | TCCTTTGAGG | TCCGGTTCTT | TTCGTTATGG | GGTCATTTTT | 5520 |
| GGGCCACCTC | CCCAGGTATG | ACTTCCAGGC | GTCGTTGCTC | GCCTGTCACT | TTCTCCCTGA | 5580 |
| TCTCTTTTAT | GCTTGTGATC | TTTTCTATCT | GTTCTTATTG | GACCTGGAGA | TAGGTACTGA | 5640 |
| CACGCTGTCC | TTTCCCTATT | AACACTAAAG | GACACTATAA | AGAGACCCTT | TCGATTTAAG | 5700 |
| GCTGTPTTGC | TTGTCCAGCC | TATTTCTTTT | ACTGGCTTGG | GTCTGTCTCG | GTGCCTGAAG | 5760 |
| CTGTCCCCGA | GCCACGCTTC | CTGCTTTCCC | GGGCTTGCTG | CTTGCGTGTG | CTTGCTGTGG | 5820 |
| GCAGCTTGTG | ACAAGTGGGC | GCTGTGACTT | TGCTGCGTGT | CAGACGTTTT | TCCCATTTC | 5880 |
| CCCGAGGTGT | CGTTGTACCA | CCTGTCCCGG | TTGGAATGGT | GGAGCCAGCT | GTGGTTGAGG | 5940 |
| GCCACCTTAT | TTCCGGCTCAC | TTTTTTTTTTT | TTTTTTTCTC | TTGGAGTCCC | GAACCTCCGC | 6000 |
| TCTTTTCTCT | TCCCAGTCTT | TCTTCCACAT | GCCTCCCGAG | TGCATTTCTT | TTTGTTTTTT | 6060 |
| TTCTTTTTTTT | TTTTTTTTTTT | TTGGGGAGGT | GGAGAGTCCC | GAGTACTTCA | CTCCTGTCTG | 6120 |
| TGGTGTCCAA | GTGTTTCATG | CACGTGCCCT | CCGAGTGAC | TTTTTTTTTGT | GGCAGTCGCT | 6180 |
| CGTTGTGTTT | TCTTGTCTG | TGTCTGCCCG | TATCAGTAAC | TGTCTTGCCC | CGCGTGTAAG | 6240 |
| ACATTCTTAT | CTCGCTTGT | TCTCCCGATT | GCGCTCGTT | GCTCACTCTT | AGATCGATGT | 6300 |
| GGTGCTCCGG | AGTTCTCTTC | GGGCCAGGGC | CAAGCCGCGC | CAGGCGAGGG | ACGGACATTC | 6360 |
| ATGGCGAATG | GCGGCCGCTC | TTCTCGTTCT | GCCAGCGGGC | CCTCGTCTCT | CCACCCCATC | 6420 |
| CGTCTGCCGG | TGGTGTGTGG | AAGGCAGGGG | TGCGGCTCTC | CGGCCCCGAC | CTGCCCCGCG | 6480 |
| CGCACTTTTC | TCAGTGGTTC | GCGTGGTCTC | TGTGGATGTG | TGAGGCGCCC | GGTTGTGCCC | 6540 |
| TCACGTGTTT | CACTTTGGTC | GTGTCTCGCT | TGACCATGTT | CCCAGAGTCG | GTGGATGTGG | 6600 |
| CCGGTGGCGT | TGCATACCTT | TCCCGTCTGG | TGTGTGCACG | CGCTGTTTCT | TGTAAGCGTC | 6660 |
| GAGGTGCTCC | TGGAGCGTTC | CAGGTTTGTG | TCTAGGTGTC | CTGCTTCTGA | GCTGGTGGTG | 6720 |
| GCGCTCCCCA | TTCCCTGGTG | TGCCTCCGGT | GCTCCGTCTG | GCTGTGTGCC | TTCCCGTTTG | 6780 |
| TGTCTGAGAA | GCCCGTGAGA | GGGGGGTCTGA | GGAGAGAAGG | AGGGGCAAGA | CCCCCTTCT | 6840 |
| TCGTCCGGTG | AGGCGCCAC | CCCGCGACTA | GTACGCCTGT | GCGTAGGGCT | GGTGCTGAGC | 6900 |
| GGTCGCGGCT | GCGGTGGAA | AGTTTCTCGA | GAGACTCATT | GCTTTCCCGT | GGGGAGCTTT | 6960 |
| GAGAGGCCTG | GCTTTCCGGG | GGGACCGGTT | GCAGGTTCTC | CCCTGTCCGC | GGATGCTCAG | 7020 |
| AATGCCCTTG | GAAGAGAACC | TTCTGTGTC | CGCAGACCCC | CCCGCGCGGT | CGCCCCGCTG | 7080 |

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|------------|-------------|------------|-------------|------------|------------|-------|
| TTGGTCTTCT | GGTTTCCCTG | TGTGCTCGTC | GCATGCATCC | TCTCTCGGTG | GCCGGGGGTC | 7140 |
| GTCGGGGTTF | TGGGTCCGTC | CCGCCCTCAG | TGAGAAAGTT | TCCTTCTCTA | GCTATCTTCC | 7200 |
| GGAAAGGGTG | CGGGCTTCTT | ACGGTCTCGA | GGGGTCTCTC | CCGAATGGTG | CCCTGGAAGG | 7260 |
| CTCGCCCTCT | GACCGCCTCC | CGCGCGCGCA | GCCTTTGCTC | TCTGCTCTAC | CGCGGCCCGC | 7320 |
| GGCCTCCCGG | CTCCGAGTTC | GGGGAGGGAT | CACGCGGGGC | AGAGCCTGTC | TGTGCTCCTG | 7380 |
| CCGTTGCTGC | GGAGCATGTG | GCTCGGCTTG | TGTGGTTGGT | GGCTGCGGAG | AGGGCTCCGT | 7440 |
| GCACACCCCC | GCGTGCGCGT | ACTTTCCCTC | CCTCCTGAGG | GCCGCGGTGC | GGACGGGGTG | 7500 |
| TGGGTAGGCG | ACGGTGGGCT | CCCGGGTCCC | CACCGCTCTT | CCCGTGCTTC | ACCGTGCCCT | 7560 |
| TCCGTGCGGT | GCGTCCCTCT | CGCTCGCGTC | CACGACTTTG | GCCGCTCCCG | CGACGGCGGC | 7620 |
| CTGCGCCGCG | CGTGGTGCGT | GCTGTGTGCT | TCTCGGGCTG | TGTGGTTGTG | TGCGCTCGCC | 7680 |
| CCCCCTTCC | CGCGGCAGCG | TTCCACGGC | TGGCGAAATC | GCGGGAGTCC | TCCTTCCCCT | 7740 |
| CCTCGGGGTC | GAGAGGGTCC | GTGTCTGGCG | TTGATTGATC | TGCTCTCGG | GGACGGGACC | 7800 |
| GTTCGTGGG | AGAACGGCTG | TTGGCCCGCT | CCGGCGCGAC | GTCGSACTG | GGGACCCACT | 7860 |
| GCCGCTCGGG | GGTCTTCGTC | GGTAGGCATC | GGTGTGTCGG | CATCGTCTC | TCTCTCGTGT | 7920 |
| CGGTGTGCGC | TCCTCGGGCT | CCCGGGGGGC | CGTCGTGTTT | CGGGTCGGCT | CGGCGCTGCA | 7980 |
| GGTGTGGTGG | GA CTGCTCAG | GGGAGTGGTG | CAGTGTGATT | CCCGCCGGTT | TTGCCTCGCG | 8040 |
| TGCCCTGACC | GGTCCGACGC | CCGAGCGGTC | TCTCGGTCCC | TTGTGAGGAC | CCCCTTCCGG | 8100 |
| GAGGGGCCCC | TTTCGGCCCG | CCTTGCCGTC | GTCGCCGGCC | CTCGTCTGTC | TGTGCTGTTT | 8160 |
| CCCCCTCCCC | GCTCGCCGCA | GCCGGTCTTT | TTTCTCTCT | CCCCCTCTCT | CCTCTGACTG | 8220 |
| ACCCGTGGCC | GTGCTGTGCG | ACCCCCGCA | TGGGGGCGGC | CGGGCACGTA | CGCGTCCGGG | 8280 |
| CGGTCAACCG | GGTCTTGGGG | GGGGGCCGAG | GGGTAAGAAA | GTCGGCTCGG | CGGGCGGGAG | 8340 |
| GAGCTGTGGT | TTGGAGGGCG | TCCCGGCCCC | CGCGCCGTGG | CGGTGTCTTG | CGCGTCTTTG | 8400 |
| GAGAGGGCTG | CTGCGAGGG | GAAAGGTTTG | CCCCCGGAGG | GCAAAGGGAA | AGAGGCTAGC | 8460 |
| AGTGGTCATT | GTCCCGACGG | TGTGGTGGTC | TGTTGGCCGA | GGTGCGTCTG | GGGGGCTCGT | 8520 |
| CCGGCCCTGT | CGTCCGTCGG | GAAGGCGCGT | GTTGGGGCCT | GCCGGAAGTG | CGAGGTGGGT | 8580 |
| ACCCTGGCGG | TGGGATTAAC | CCCGCGCGCG | TGTCCCGGTG | TGGCGGTGGG | GGCTCCGGTC | 8640 |
| GATGCTACCT | TCCCTCTCCC | CGAGGTCTCA | GGCCTTCTCC | GCGCGGGCTC | TCGGCCCTCC | 8700 |
| CCTCGTTTCT | CCCTCTCGCG | GGGTTCAAGT | CGCTCGTCGA | CCTCCCCCTC | TCCGTCTTTC | 8760 |
| CATCTCTCGC | GCAATGGCGC | CGCCCGAGTT | CACGGTGGGT | TCGTCTCTCC | CCTCCGCTTC | 8820 |
| TCGCCGGGGG | CTG3CCGCTG | TCCGGTCTCT | CCTGCCCGAC | CCCCGTGTCG | GTGCTCTTCT | 8880 |
| CTCGCCGGCT | TCGCGGACTC | CTGGCTTTCG | CCGGAGGGTC | AGGGGGCTTC | CCGGTTCCCC | 8940 |
| GACGTTGCGC | CTCGCTGCTG | TGTGCTTGGG | GGGGGCCCGC | TGCGGCCTCC | GCCCGCCCGT | 9000 |
| GAGCCCCGTC | GCAACCCGCC | GGTGTGCGGT | TTGCGCCGCG | GGTCAGTTGG | GCCCTGGCGT | 9060 |
| TGTGTGCGGT | CGGGAGCGTG | TCCGCCTCGC | GGCGGCTAGA | CGCGGGTGTC | GCCGGGCTCC | 9120 |
| GACGGGTGGC | CTATCCAGGG | CTCGCCCCCG | CCGACCCCCG | CCTGCCCGTC | CCGGTGGTGG | 9180 |
| TCGTTGGTGT | GGGGAGTGAA | TGGTGCTACC | GGTCATTCCC | TCCCGCGTGG | TTTGACTGTC | 9240 |
| TGCCCCGTGT | CGCGCTTCTC | TTTCCGCCAA | CCCCCACGCC | AACCCACCAC | CCTGTCTTCC | 9300 |
| CGGCCCCGTC | CGGTGACGCT | TCCGGCTCTC | CCGATGCCGA | GGGGTTCCGG | ATTTGTGCCG | 9360 |
| GGGACGGAGG | GGAGAGCGGG | TAAGAGAGGT | GTCCGAGAGC | TGTCCCGGGG | CGACGCTCGG | 9420 |
| GTTGGCTTTG | CCGCGTGCGT | GTGCTCGCGG | ACGGGTTTTG | TCGGACCCCG | ACGGGGTCGG | 9480 |
| TCCGGCCGCA | TGCACTCTCC | CGTTCCGCGC | GAGCGCCCGC | CCGGCTCACC | CCCGGTTTGT | 9540 |
| CCTCCCGCGA | GGCTCTCCGC | CGCCGCGGCC | TCTCTCTCCT | CTCTCGCGCT | CTCTGTCCCG | 9600 |
| CCTGGTCTCT | TCCACCCCCC | GACGCTCCGC | TCGCGCTTCC | TTACCTGGTT | GATCCTGCCA | 9660 |
| GGTAGCATAT | GCTTGTCTCA | AAGATTAAGC | CATGCATGTC | TAAGTACGCA | CGGCCGGTAC | 9720 |
| AGTGAAACTG | CGAATGGCTC | ATTAAATCAG | TTATGGTTCC | TTTGGTFCGT | CGTCTCTCTC | 9780 |
| CTACTTGGAT | AACTGTGGTA | ATTCTAGAGC | TAATACATGC | CGACGGGCGC | TGACCCCTCT | 9840 |
| TCCCGGGGGG | GGATGCGTGC | ATTTATCAGA | TCAAAACCAA | CCCGGTGAGC | TCCCTCCCGG | 9900 |
| CTCCGGCCCG | GGGTGCGGCG | CCGGCGGCTT | GGTGA CTCTA | GATAACCTCG | GGCCGATCGC | 9960 |
| ACGCCCCCCG | TGGCGGCGAC | GACCCATTCC | AACGTCTGCC | CTATCAACTT | TCGATGGTAG | 10020 |
| TCGCCGTGCC | TACCATGGTG | ACCACGGGTG | ACGGGGAATC | AGGGTTCGAT | TCCGGAGAGG | 10080 |
| GAGCCTGAGA | AACGGCTACC | ACATCCAAGG | AAGGCAGCAG | GCGCGCAAAT | TACCCACTCC | 10140 |
| CGACCCGGGG | AGGTAGTGAC | GAAAAATAAC | AATACAGGAC | TCTTTCGAGG | CCCTGTAATT | 10200 |
| GGAATGAGTC | CACTTTAAAT | CCTTTAACGA | GGATCCATTG | GAGGGCAAGT | CTGGTGCCAG | 10260 |
| CAGCCGCGGT | AATTCCAGCT | CCAATAGCGT | ATATTAAAGT | TGCTGCAGTT | AAAAAGCTCG | 10320 |
| TAGTTGGATC | TTGGGAGCGG | GCGGGCGGTC | CGCCGCGAGG | CGAGTCACCG | CCCGTCCCCG | 10380 |
| CCCCTTGCTC | CTCGGCGCCC | CCTCGATGCT | CTTAGCTGAG | TGTCCCGCGG | GGCCCGAAGC | 10440 |
| GTTTACTTTG | AAAAAATTAG | AGTGTTCAAA | GCAGGCCCGA | GCCGCTTGGG | TACCGCAGCT | 10500 |
| AGGAATAATG | GAATAGGACC | GCGGTTCTAT | TTTGTGGTGT | TTCGGAACTG | AGGCCATGAT | 10560 |
| TAAGAGGGAC | GGCCGGGGGC | ATTTCGTATT | CGCCGCTAGA | GGTGAAATTC | TTGGACCGGC | 10620 |
| GCAAGACGGA | CCAGAGCGAA | AGCATTTGCC | AAGAATGTTT | TCATTAATCA | AGAACGAAAG | 10680 |
| TCGAGAGTTT | GAAGACGATC | AGATACCGTC | GTAGTTCCGA | CCATAAACGA | TGCCGACTGG | 10740 |
| CGATGCGGCG | GCGTTATTCC | CATGACCCGC | CGGGCAGCTT | CCGGGAAACC | AAAGTCTTTG | 10800 |
| GGTTCCGGGG | GGAGTATGGT | TGCAAAGCTG | AAACTTAAAG | GAATTGACGG | AAGGGCACCA | 10860 |
| CCAGGAGTGG | GCCTGCGGCT | TAATTTGACT | CAACACGGGA | AACCTCACCC | GGCCCGGACA | 10920 |
| CGGACAGGAT | TGACAGATTG | ATAGCTCTTT | CTCGATTCCG | TGGGTGGTGG | TGCATGGCCG | 10980 |

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|-------------|-------------|------------|------------|-------------|-------------|-------|
| TTCTTAGTTC | GTGGAGCGAT | TTGTCTGGTT | AATTCGGATA | ACGAAACGAGA | CTCTGGCATG | 11040 |
| CTAACTAGTT | ACGCGACCCC | CGAGCGGTCC | GCSTCCCCCA | ACTTCTTAGA | GGGACAAAGTG | 11100 |
| GCCTTCAGCC | ACCCGAGATT | GAGCAATAAC | AGGTCTGTGA | TGCCCCTAGA | TGTCCCGGGG | 11160 |
| TGCACGCGCG | CTACACTGAC | TGGCTCAGCG | TGTGCCTACC | CTGCGCGGCG | AGGCGCGGGT | 11220 |
| AACCCGTTGA | ACCCCATTCG | TGATGGGGAT | CGGGGATTGC | AATTATTCCC | CATGAACGAG | 11280 |
| GAATTCGCCAG | TAAGTGGGGG | TCATAAGCTT | GCCTTGATTA | AGTCCCTGCC | CTTTGTACAC | 11340 |
| ACCGCCCGTC | GCTACTACCG | ATTGGATGGT | TTAGTGAGGC | CCTCGGATCG | GCCCCGCCCG | 11400 |
| GGTCGGCCCCA | CGCCCCCTGSC | GGAGCGCTGA | GAAGACGGTC | GAACCTGACT | ATCTAGAGGA | 11460 |
| AGTAAAAGTC | GTAACAAGGT | TTCCGTAGGT | GAACCTGCGG | AAGGATCATT | AAACGGGAGA | 11520 |
| CTGTGGAGGA | GCGGGCGGCT | GGCCCCGTCT | CCCCGTCTTG | TGTGTGTCT | CGCCGGGAGG | 11580 |
| CGCGTGCCTC | CCGGGTCCCCG | TGCCCCCGCT | GTGGAGCGAG | GTGTCTGGAG | TGAGGTGAGA | 11640 |
| GAAGGGGTGG | GTGGGGTCCG | TCTGGGTCCG | TCTGGGACCG | CCTCCGATTT | CCCCTCCCCC | 11700 |
| TCCCCCTCTC | CTCGTCCGGC | TCTGACCTCG | CCACCCTACC | GCGGCGGCGG | CTGCTCGCGG | 11760 |
| GGTCTTTGCC | TCTTTCCCGT | CCGGCTCTTC | CGTGTACAG | AGGGGCGGTA | CGTCTTACG | 11820 |
| GGTTTTTTGAC | CCGTCCCGGG | GGCGTTCGGT | CGTCGGGGCG | CGCGCTTTGC | TCTCCCCGGCA | 11880 |
| CCCATCCCCG | CCGCGGCTCT | GGCTTTTCTA | CGTTGGCTGG | GGCGGTTGTC | GCGTGTGGGG | 11940 |
| GGATGTGAGT | GTCGCGTGTG | GGCTCGCCCC | TCCCGATGCC | ACGCTTTTCT | GGCCTCGCGT | 12000 |
| GTCCTCCCCG | CTCCTGTCCC | GGGTACCTAG | CTGTCCGCGT | CCGGCGCGGA | GGTTTAAAGTA | 12060 |
| CCCCGGGGGG | CGCCCGCTGC | CGCCCCCTAG | GTGCGGGGAG | GGTGGGGCCC | GTAGGGAAAGT | 12120 |
| CGGTCTGTCG | GGCGGCTCTC | CCTCAGACTC | CATGACCCTC | CTCCCCCGCG | TGCCGCCGTT | 12180 |
| CCCGAGGCGG | CGGTCTGTGT | GGGGGGTGG | TGTCTGGAGC | CCCCTCGGGC | GCCGTGGGGG | 12240 |
| CCCGACCCCG | GCCGCCGGCT | TGCCCCGATT | CCGCGGGTCC | GTCCTGTCCG | TGCCGGTCCG | 12300 |
| GGGTTCGCCG | GTCGTTCCCG | TGTTTTTCCG | CTCCCCACCC | TTTTTTTTTT | CTCCCCCCCC | 12360 |
| CACGTGTCTC | GTTTCGTTCC | TGCTGGCCGG | CCTGAGGCTA | CCCCTCGGTC | CATCTGTTCT | 12420 |
| CCTCTCTCTC | CGGGGAGAGG | AGGGCGGTGG | TGCTTGGGGG | ACTGTGCCGT | CGTCAGCACC | 12480 |
| CGTGAGTTCG | CTCACACCCG | AAATACCGAT | ACGACTCTTA | GCGGTGGATC | ACTCGGCTCG | 12540 |
| TGCGTCGATG | AAGAACGCAG | CTAGCTGCGA | GAATTAATGT | GAATTGCAGG | ACACATTGAT | 12600 |
| CATCGACACT | TCGAAGCCAC | TTGCGGCCCC | GGGTTCCTCC | CGGGGCTACG | CCTGTCTGAG | 12660 |
| CGTCGGTTGA | CGATCAATCG | CGTACCCCGC | TGCGGTGGGT | GCTGCGCGGC | TGGGAGTTTG | 12720 |
| CTCGCAGGGC | CAACCCCCCA | ACCCGGGTCC | GGCCCTCCGT | CTCCCGAAGT | TCAGACGTGT | 12780 |
| GGGCGGTTGT | CGGTGTGGCG | CGCGCGCCCC | CGTCGCGGAG | CCTGGTCTCC | CCCGCGCATC | 12840 |
| CGCGCTCGCG | GCTTCTTCCC | GCTCCGCGCT | TCCCAGCCCT | GCCCGTGCAC | CCCGGTCCCTG | 12900 |
| GCCTCGCGTC | GGACGCTCCC | GGACGCTGCT | CTCACAGTGC | TTTCTCGGTC | CCGTGCCCCG | 12960 |
| TGGGAACCCA | CCGCGCCCCC | GTGGCGCCCC | GGGGTGGGCG | CGTCCGCATC | TGCTCTGGTC | 13020 |
| GAGGTTGGCG | GTTGAGGGTG | TGCGTGCGCC | GAGGTGGTGG | TCGGTCCCCT | GCGGCCCGCG | 13080 |
| GGTTGTCCGG | GTGGCGGTCC | ACGAGGGCCG | GTCGGTCCGC | TGCGGTGGTT | GTCTGTGTGT | 13140 |
| GTTTGGGTCT | TGCGCTGGGG | GAGGCGGGGT | CGACCGCTCG | CGGGGTTGGC | GCGGTCCGCC | 13200 |
| GGCGCCGCGC | ACCCTCCGGC | TTGTGTGGAG | GGAGAGCGAG | GGCGAGAACG | GAGAGAGGTG | 13260 |
| GTATCCCCCG | TGGCGTTGCG | AGGGAGGGTT | TGGCGTCCCG | CGTCCGTCCG | TCCCTCCCTC | 13320 |
| CCTCGGTGGG | CGCCTTCGCG | CCGCACGCGG | CCGCTAGGGG | CGTCCGGGGC | CCGTGGCCCC | 13380 |
| CGTGGCTCTT | CTTCGTCTCC | GCTTCTCCTT | CACCCGGGCG | GTACCCGCTC | CGGCGCCGGC | 13440 |
| CCGCGGGACG | CCGCGGCGTC | CGTCCGCCGA | TGCGAGTCTC | CCCGGGTGTG | TGCGAGTTCC | 13500 |
| GGGAGGGAGA | GGGCGTCCGT | GACCCGTTGC | GTCCCGGCTT | CCCTGGGGGG | GACCCGGCGT | 13560 |
| CTGTGGGCTG | TGCGTCCCGG | GGGTTGCGTG | TGAGTAAGAT | CCTCCACCCC | CGCCGCCCTC | 13620 |
| CCCTCCCGCC | GGCCTCTCGG | GGACCCCTCG | AGACGGTTCC | CCGGCTCGTC | CTCCCGTGCC | 13680 |
| GCCGGGTGCC | GTCTCTTTCC | CGCCCGCCCT | CTCGCTCTCT | TCTTCCCGCG | GCTGGGCGCG | 13740 |
| TGTCCTCCCT | TTCTGACCCG | GACCTCAGAT | CAGACGTGGC | GACCCGCTGA | ATTTAAGCAT | 13800 |
| ATTAGTCAGC | GGAGGAAAAG | AAACTAACCA | GGATTCCCTC | AGTAACGGCG | AGTGAACAGG | 13860 |
| GAAGAGCCCA | GCGCCGAATC | CCCGCCCGCG | GTCGCGGCGT | GGGAAATGTG | GCGTACGGAA | 13920 |
| GACCCACTGC | CCGGCGCCGC | TGCTGGGGGG | CCCAAGTCTT | TCTGATCGAG | GCCCAGCCCC | 13980 |
| TGGACGGTGT | GAGGCGGGTA | GCGGCCCCGG | CGCGCCGGGC | TCGGGTCTTC | CCGGAGTCGG | 14040 |
| GTTGCTTGGG | AATGCAGCCC | AAAGCGGGTG | GTAAGTCCCA | TCTAAGGCTA | AATACCGGCA | 14100 |
| CGAGACCGAT | AGTCAACAAG | TACCGTAAGG | GAAAGTTGAA | AAGAACTTTG | AAGAGAGAGT | 14160 |
| TCAAGAGGGC | GTGAAACCGT | TAAGAGGTAA | ACGGGTGGGG | TCCGCGCAGT | CCGCCCGGAG | 14220 |
| GATTCAACCC | GGCGGCGCGC | GTCCGGCCGT | GCCCCGGTGT | CCCGGCGGAT | CTTCCCCGCT | 14280 |
| CCCCGTCTCT | CCCCACCCCT | CCACCCGCGC | GTCGTTCCTC | TCTTCTCTCC | CGCGTCCGGC | 14340 |
| GCCTCCGGCG | GCGGGCGCGG | GGGGTGGTGT | GCGTGTGGCG | CGCGGGCGGG | GCCGGGGGTG | 14400 |
| GGGTCCGGCG | GGGACCGCCC | CCGGCCGGCG | ACCGGCCCGC | GCCGGGCGCA | CTTCCACCGT | 14460 |
| GGCGGTGCGC | CGCGACCGGC | TCCGGGACGG | CCGGGAAGGC | CCGGTGGGGA | AGGTGGCTCG | 14520 |
| GGGGGGGCGG | CGCGTCTCAG | GGCGCGCCGA | ACCACCTCAC | CCCGAGTGTT | ACAGCCCTCC | 14580 |
| GGCCGCTCTT | TGCGCGAATC | CCGGGGCCGA | GGAAGCCAGA | TACCCGTCCG | CGCGCTCTCC | 14640 |
| CTCTCCCCCC | TCCCGCTCTC | CGGCGGGCGC | TGGGGGTGGG | GGCCGGGGCG | CCCCCTCCAC | 14700 |
| GGCGCGACCG | CTCTCCACCC | CCCCCTCCGT | GCCTCTCTCG | GGGCCCCGGT | GGGGGCGGGG | 14760 |
| CGGACTGTCC | CCAGTGCGCC | CCGGGCGTCG | TGCGCGCGTC | GGGTCCCCGG | GGGACCGTCG | 14820 |
| GTCACGCGTC | TCCCGACGAA | GCCGAGCGCA | CGGGGTCCGC | GGCGATGTCC | GCTACCCACC | 14880 |

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|-------------|-------------|------------|------------|------------|------------|-------|
| CGACCCGCTCT | TGAAACACGG | ACCAAGGAGT | CTAACGCGTG | CGGAGTCAG | GGGCTCGTCC | 14940 |
| GAAAGCCGCG | GTGGCGCAAT | GAAGGTGAA | GGCCCCGCCC | GGGGGCCCGA | GSTGGGATCC | 15000 |
| CGAGGCTCTCT | CCAGTCCGCG | GAGGGCGCAC | CACCGGCCCC | TCTCGCCCGC | CGGCGCGGGG | 15060 |
| AGGTGGAGCA | CGAGCGTACG | CGTTAGGACC | CGAAAGATGG | TGAACTATGC | TTGGGCAGGG | 15120 |
| CGAAGCCAGA | GGAAACTCTG | GTGGAGGTCC | GTAGCGGTCC | TGACGTGCAA | ATCGGTCTCT | 15180 |
| CGACCTGGGT | ATAGGGGCGA | AAGACTAATC | GAACCATCTA | GTAGCTGGTT | CCCTCCGAA | 15240 |
| TTTCCCTCAG | GATAGCTGGC | GCTCTCGCTC | CCGACGTACG | CAGTTTTATC | CGGTAAAGCG | 15300 |
| AATGATTAGA | GSTCTTGGGG | CCGAAACGAT | CTCAACCTAT | TCTCAAACCT | TAAATGGGTA | 15360 |
| AGAAGCCCGG | CTCGCTGGCG | TGGAGCCGGG | CGTGGAATGC | GAGTGCCTAG | TGGGCCACTT | 15420 |
| TTGGTAAGCA | GAACTGGCGC | TGCGGGATGA | ACCGAACGCC | GGGTAAAGGC | GCCCCGATGC | 15480 |
| GACGCTCATC | AGACCCCAAG | AAAGGTGTTG | GTTGATATAG | ACAGCAGGAC | GGTGGCCATG | 15540 |
| GAAGTCGGAA | TCCGCTAAGG | AGTGTGTAAC | AACTCACCTG | CCGAATCAAC | TAGCCCTGAA | 15600 |
| AATGGATGGC | GCTGGAGCGT | CGGGCCCATG | CCCGGCCGTC | GCCGCAGTCG | GAACGGAAAG | 15660 |
| GGACGGGAGC | GGCCGCGGGT | GCGCGTCTCT | CGGGTCCGGG | GGTGGCTGGC | GGGGGCCCGT | 15720 |
| CCCCCGCCTC | CCCTCCGCGC | GCCGGGTTCG | CCCCCGCGGC | GTGGGGCCCC | GCGGAGCCTA | 15780 |
| CGCCGCGACG | AGTAGGAGGG | CCGCTGCGGT | GAGCCTTGAA | GCCTAGGGCG | CGGGCCCGGG | 15840 |
| TGGAGCCGCC | GCAGGTGCAG | ATCTTGGTGG | TAGTAGCAAA | TATTCAAACG | AGAACTTTGA | 15900 |
| AGGCCGAAGT | GGAGAAGGGT | TCCATGTGAA | CAGCAGTTGA | ACATGGGTCA | GTCGGTCTCT | 15960 |
| AGAGATGGGC | GAGTAGCCGT | CCGAAGGGAC | CCGCGATGGC | CTCCGTTCGC | CTCGGCCGAT | 16020 |
| CGAAAGGGAG | TGGGTTCAG | ATCCCCGAAT | CCGGAGTGGC | GGAGATGGGC | GCCGCGAGGC | 16080 |
| CAGTGCGGTA | ACGCGACCGA | TCCCGGAGAA | GCCGGCGGGA | GGCCTCGGGG | AGAGTTCTCT | 16140 |
| TTTCTTTGTG | AAGGGCAGGG | CGCCCTGGAA | TGGGTTCGCG | CCGAGAGAGG | GGCCCGTGCC | 16200 |
| TTGGAAAGCG | TGCGGGTTCC | GGCGGCGTCT | GTTAGCTCTC | CGCTGGCCCT | TGAAAATCCG | 16260 |
| GGGGAGAGGG | TGTAAATCTC | GCGCCGGGCC | GTACCCATAT | CCGCAGCAGG | TCTCCAAGGT | 16320 |
| GAACAGCCTC | TGGCATGTTG | GAACAATGTA | GGTAAGGGAA | GTCGGCAAGC | CGGATCCGTA | 16380 |
| ACTTCGGGAT | AAGGATTGGC | TCTAAGGGCT | GGTTCGGTCG | GGCTGGGGCG | CGAAGCGGGG | 16440 |
| CTGGGCGCGC | GCCGCGGCTG | GACGAGGCGC | CGCCGCCCTC | TCCCACGTCC | GGGGAGACCC | 16500 |
| CCCGTCCTTT | CCGCCCGGGC | CCGCCCTCCC | CTCTTCCCGC | CGGGGCCCGC | TCTGCCCCCG | 16560 |
| CGTCGTCGCC | ACCTCTCTTC | CCCCCTCCTT | CTTCCCGTCG | GGGGCGGGGT | CGGGGGTCGG | 16620 |
| CGCGCGGCGC | GGGCTCCGGG | GCGGCGGGTC | CAACCCCGCG | GGGGTTCCGG | AGCGGGAGGA | 16680 |
| ACCAGCGGTC | CCCGGTGGGG | CGGGGGGCCC | GGACACTCGG | GGGGCCGGCG | GCGGCGGCGA | 16740 |
| CTCTGGACGC | GAGCCGGGCC | CTTCCCGTGG | ATCGCCTCAG | CTGCGGCGGG | CGTGGGCGCC | 16800 |
| GCTCCCGGGG | AGCCCGGCGG | GTGCCGCGCG | GGGTCCCCTC | CCCGCGGGGC | CTCGCTCCAC | 16860 |
| CCCCCATCG | CCTCTCCCGA | GGTGCCTGGC | GGGGCGGGGC | GGGCGTGTCC | CGCGCGTGTG | 16920 |
| GGGGGAACCT | CCGCGTCGGT | GTTCCCCCGC | CGGGTCCGCC | CCCCGGGGCG | CGGTTTTCCG | 16980 |
| CGCGGCGCCC | CCGCCTCGGC | CGGCGCCTAG | CAGCCGACTT | AGAACTGGTG | CGGACCAGGG | 17040 |
| GAATCCGACT | GTTTAATTAA | AACAAAGCAT | CGCGAAGGCC | CGCGGCGGGT | GTTGACGCGA | 17100 |
| TGTGATTTCT | GCCCAATGCT | CTGAATGTCA | AAGTGAAGAA | ATTCAATGAA | GCGCGGGTAA | 17160 |
| ACGGCGGGAG | TAACATATGAC | TCTCTTAAGG | TAGCCAAATG | CCTCGTCATC | TAATTAGTGA | 17220 |
| CGCGCATGAA | TGGATGAACG | AGATTCCCAC | TGTCCCTACC | TACTATCCAG | CGAAACCACA | 17280 |
| GCCAAGGGAA | CGGGCTTGGC | GGAATCAGCG | GGGAAAGAAG | ACCCTGTTGA | GCTTGACTCT | 17340 |
| AGTCTGGCAC | GTGAAGAGA | CATGAGAGGT | GTAGAATAAG | TGGGAGGGCC | CCGGCGCCCG | 17400 |
| GCCCCGTCTC | CGCGTCGGGG | TGCGGGCACG | CCGGCCTCGC | GGGCCGCGCG | TGAAATACCA | 17460 |
| CTACTCTCAT | CGTTTTTTCA | CTGACCCGGT | GAGGCGGGGG | GGCGAGCCCC | GAGGGGCTCT | 17520 |
| CGCTTCTGGC | GCCAAGCGTC | CGTCCCGCGC | GTGCGGGCGG | GCGCGACCCG | CTCCGGGGAC | 17580 |
| AGTGCCAGGT | GGGGAGTTTG | ACTGGGGCGG | TACACCTGTC | AAACGGTAAC | GCAGGTCTCC | 17640 |
| TAAGGCGAGC | TCAGGGAGGA | CAGAAACCTC | CCGTGGAGCA | GAAGGGCAAA | AGCTCGCTTG | 17700 |
| ATCTTGATTT | TCAGTACGAA | TACAGACCGT | GAAAGCGGGG | CCTCACGATC | CTTCTGACCT | 17760 |
| TTTGGGTTTT | AAGCAGGAGG | TGTCAGAAAA | GTTACCACAG | GGATAACTGG | CTTGTGGCGG | 17820 |
| CCAAGCGTTC | ATAGCGACGT | CGCTTTTTGA | TCCTTCGATG | TGCGCTCTTC | CTATCATTTG | 17880 |
| GAAGCAGAA | TCACCAAGCG | TTGGATTGTT | CACCCACTAA | TAGGGAACGT | GAGCTGGGTT | 17940 |
| TAGACCGTCG | TGAGACAGGT | TAGTTTTACC | CTACTGATGA | TGTGTTGTTG | CCATGGTAAT | 18000 |
| CCTGCTCAGT | ACGAGAGGAA | CCGCAGGTTC | AGACATTTGG | TGTATGTGCT | TGGCTGAGGA | 18060 |
| GCCAATGGGG | CGAAGCTACC | ATCTGTGGGA | TTATGACTGA | ACGCCTCTAA | GTCAGAATCC | 18120 |
| GCCCAAGCGG | AACGATACGG | CAGCGCCGAA | GGAGCCTCGG | TTGGCCCCCG | ATAGCCGGGT | 18180 |
| CCCCGTCCTG | CCCGCTCGGC | GGGTCCCCCG | CGTCGCGCGG | CGGCGGCGCG | GGGTCTCCCC | 18240 |
| CCGCGGGCGC | TGCGGACCGG | GGTCCGCTGC | GGAGAGCCGT | TGCTCTTGGG | AAACGGGGTG | 18300 |
| CGGCCGGA | GGGGGCCCGC | CTCTCGCCCC | TCACGTTGAA | CGCACGTTTC | TGTGGAACCT | 18360 |
| GGCGCTAAAC | CATTTCGTAGA | CGACCTGCTT | CTGGGTCTGG | GTTTCGTACG | TAGCAGAGCA | 18420 |
| GCTCCCTCGC | TGCGATCTAT | TGAAAGTCAG | CCCTCGACAC | AAGGGTTTGT | CTCTCGGGGC | 18480 |
| TTTCCGCTCG | CACGCCGCTC | CGCTCGACG | CGACCTGTC | GCCGCCCCGG | CGTCACGGGG | 18540 |
| GCGGTGCGCT | CGGCCCCCGC | GCGGTTGCCC | GAACGACCGT | GTGGTGGTTG | GGGGGGGGAT | 18600 |
| CGTCTTCTCC | TCCGTCTCCC | GAGGACGGTT | CGTTTCTCTT | TCCCTTCCG | TGCTCTCCT | 18660 |
| TGGGTGTGGG | AGCCTCGTGC | CGTCGCGACC | GCGGCCTGCC | GTCGCCTGCC | GCCGCGAGCC | 18720 |
| CTTGCCCTCC | GCCCTTGGCC | AAGCCGGAGG | GCGGAGGAGG | GGGATCGGCG | GCGGCGGCGA | 18780 |

| | | | | | | |
|------------|------------|------------|------------|-------------|------------|-------|
| CCGCGGCGCG | GTGACGCACG | GTGGGATCCC | CATCCTGGGC | GCGTCCGTCG | GGGACGGCGG | 18840 |
| GTTGGAAGGG | CGGGAGGGGT | TTTTCCCGTG | AACGCGCGGT | TGGGCGCCAG | GCCTCTGGCG | 18900 |
| GCCGCGGGGG | CGCTCTCTCC | GGCCGAGCAT | CCCCACTCCC | GCCCCCTCCT | TTGCGCGGCG | 18960 |
| GCGGCGGCGA | CGTGCGTACG | AGGGGAGGAT | GTGCGGGTGT | GGAGGCGGAG | AGGGTCCGGC | 19020 |
| GCGGCGCCTC | TTCCATTTTT | TCCCCCCCCA | CTTCGGAGGT | CGACCAGTAC | TCCGGGCGAC | 19080 |
| ACTTTGTTTT | TTTTTTTTTC | CCCGATGCTG | GAGGTGAGCC | AGATGTCCGA | AAGTGTCCCC | 19140 |
| CCCCCCCCCC | CCCCCGGGCG | CGGAGCGGCG | GGGCCACTCT | GGACTCTTTT | TTTTTTTTTT | 19200 |
| TTTTTTTTTT | TTAAATTCCT | GGAACTTTTA | GGTCGACCAG | TTGTCCGTCT | TTTACTCCTT | 19260 |
| CATATAGGTC | GACCAGTACT | CCGGGTGGTA | CTTTGTCTTT | TTCTGAAAAT | CCCAGAGGTC | 19320 |
| GACCAGATAT | CCGAAAGTCC | TCTCTTTCCC | TTTACTCTTC | CCCACAGCGA | TTCTCTTTTT | 19380 |
| TTTTTTTTTT | TTTGGTGTGC | CTCTTTTTGA | CTTATATACA | TGTAAATAGT | GTGTACGTTT | 19440 |
| ATATACTTAT | AGGAGGAGGT | CGACCAGTAC | TCCGGGCGAC | ACTTTGTTTT | TTTTTTTTTT | 19500 |
| TCCACCGATG | ATGGAGGTGC | ACCAGATGTC | CGAAAGTGTC | CCGTCCCCCC | CCTCCCCCCC | 19560 |
| CCGCGACGCG | GCGGGCTCAC | TCTGGACTCT | TTTTTTTTTT | TTTTTTTTTT | TTTAAATTTT | 19620 |
| TGGAACCTTA | AGGTGACCCA | GTTGTCCGTC | TTTCACTCAT | TCATATAGGT | CGACCGGTGG | 19680 |
| TACTTTGTCT | TTTTCTGAAA | ATCGCAGAGG | TCGACCAGAT | GTCAGAAAAGT | CTGGTGGTCG | 19740 |
| ATAAATTATC | TGATCTAGAT | TTGTTTTTCT | GTTTTTCAGT | TTTGTGTTGT | TTTGTGTTGT | 19800 |
| TTTGTGTTGT | TTTGTTTTGT | TTTGTTTTGT | TTTGTTTTGT | TTTGTTTTGT | TTTGTTTTGT | 19860 |
| TTTGTGTTGT | GTTGTGTTGT | GTTGTGTTGT | GTTGGGTTGG | GTTGGGTTGG | GTTGGGTTGG | 19920 |
| GTTGGGTTGG | GTTGGGTTGT | GTTGTGTTGT | TTTGTGTTGT | TTGGTGTGTT | TGGTTTTGTT | 19980 |
| TTGTTTGCTG | TTGTTTTGTG | TTTTGCGGGT | CGAACAGTTG | TCCCTAACCG | AGTTTTTTTT | 20040 |
| TACACAAACA | TGCACCTTTT | TTAAATAAAA | TTTTTAAAAA | AAATGCGAAA | ATCGACCAAT | 20100 |
| TATCCCTTTC | CTTCTCTCTC | TTTTTTAAAA | ATTTTCTTTG | TGTGTGTGTG | TGTGTGTGTG | 20160 |
| TGTGTGTGTG | TGCGTGTGTG | TGTGTGTGTG | CGTGCAGCGT | GCGCGCGCTC | GTTTTATAAA | 20220 |
| TACTTATAAT | AATAGGTCGC | CGGGTGGTGG | TAGCTTCCCG | GACTCCAGAG | GCAGAGGCAG | 20280 |
| GCAGACTTCT | GAGTTCGAGG | CCAGCCTGGT | CTACAGAGGA | ACCCGTGTCT | GAAAAATGAA | 20340 |
| AATAAATACA | TACATACATA | CATACATACA | TACATACATA | CATACATACA | TACATATGAG | 20400 |
| GTTGACCAGT | TGTCAATCCT | TTAGAATTTT | GTTTTTAATT | AATGTGATAG | AGAGATAGAT | 20460 |
| AATAGATAGA | TGGATAGAGT | GATACAAATA | TAGGTTTTTT | TTTCAGTAAA | TATGAGGTTG | 20520 |
| ATTAACCACT | TTTCCCTTTT | TAGGTTTTTT | TTTTTTTCCC | CTGTCCATGT | GGTTGCTGGG | 20580 |
| ATTTGAACCT | AGGACCCTGG | CAGGTCAACT | GGAAAACGTG | TTTTCTATAT | ATATAAATAG | 20640 |
| TGGTCTGTCT | GCTGTTTGTG | TGTTTGCTTG | CTTGCTTGCT | TGCTTGCTTG | CTTGCTTGCT | 20700 |
| TGCTTTTTTT | TTTCTTCTGA | GACAGTATTT | CTCTGTGTAA | CCTGGTGCCC | TGAAACTCAC | 20760 |
| TCTGTAGACC | AGCCTGGCCT | CAATCGAACT | CAGAAATCCT | CCTGCCTCTT | GTCTACCTCC | 20820 |
| CAATTTTGGA | GTAAAGGTGT | GCTACACCAC | TGCCTGGCAT | TATTATCATT | ATCATTATTA | 20880 |
| ATTTTATTAT | TAGACAGAAC | GAAATCAACT | AGTTGGTCCT | GTTTCGTTAA | TTCATTTGAA | 20940 |
| ATTAGTTGGA | CCAATTAGTT | GGCTGGTTTG | GGAGGTTTCT | TTTGTTCCTG | ATTTGGGTGT | 21000 |
| TTGTGGGGCT | GGGATCAGG | TATCTCAACG | GAATGCATGA | AGGTTAAGGT | GAGATGGCTC | 21060 |
| GATTTTTGTA | AAGATTACTT | TTCTTAGTCT | GAGGAAAAAA | TAAAAATAATA | TTGGGCTACG | 21120 |
| TTTCATTGCT | TCATTCTAT | TTCTCTTTCT | TTCTTTCTTT | CTTTCAGATA | AGGAGGTCCG | 21180 |
| CCAGTTCCTC | CTGCCTTCTG | GAAGATGTAG | GCATTGCATT | GGGAAAAGCA | TTGTTTGAGA | 21240 |
| GATGTGCTAG | TGAACAGAG | AGTTTGGATG | TCAAGCCGTA | TAATGTTTAT | TACAATATAG | 21300 |
| AAAAGTTCTA | ACAAAGTGAT | CTTTAACTTT | TTTTTTTTTT | TTTCTCCTTC | TACTTCTACT | 21360 |
| TGTTCTCACT | CTGCCACCAA | CGCGCTTTGT | ACATTGAATG | TGAGCTTTGT | TTTGCTTAAC | 21420 |
| AGACATATAT | TTTTTCTTTT | GGTTTGTCTT | GACATGGTTT | CCCTTTCTAT | CCGTGCAGGG | 21480 |
| TTCCAGACG | GCCTTTTGAG | AATAAAATGG | GAGGCCAGAA | CCAAAGTCTT | TTGAATAAAG | 21540 |
| CACCACAAC | CTAACCTGTT | TGGCTGTTTT | CCTTCCCAAG | GCACAGATCT | TTCCAGCAT | 21600 |
| GGAAAAGCAT | GTAGCAGTTG | TAGGACACAC | TAGACGAGAG | CACCAGATCT | CATTGTGGGT | 21660 |
| GGTTGTGAAC | CACCCACCAT | GTGGTTGCCT | GGGATTTGAA | CTCAGGATCT | TCAGAAGACG | 21720 |
| AGTCAGGGCT | CTAAACCGAT | GAGCCATCTC | TCCAGCCCTC | CTACATTCCT | CTTAAGGCA | 21780 |
| TGAATGATCC | CAGCATGGGA | AGACAGTCTG | CCCTCTTTGT | GGTATATCAC | CATATACTCA | 21840 |
| ATAAAATAAT | GAAATGAATG | AAGTCTCCAC | GTATTTATTT | CTTCGAGCTA | TCTAAATCTT | 21900 |
| CTCACAGCAC | CTCCCCCTCC | CCCACACTGC | CTTCTCCCT | ATGTTTGGGT | GGGGCTGGGG | 21960 |
| GAGGGGTGGG | GTGGGGGCAG | GGATCTGCAT | GTCTTCTTGC | AGGTCTGTGA | ACTATTTGCG | 22020 |
| ATGGCCTGGT | TCTCTGAACT | GTTGAGCCTT | GTCTATCCAG | AGGCTGACTG | GCTAGTTTTT | 22080 |
| TACCTGAAGT | CCCTGAGTGA | TGATTTCCTT | GTGAATTC | | | 22118 |

(2) INFORMATION FOR SEQ ID NO:17:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 42999 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Genomic DNA
 (iii) HYPOTHETICAL: NO
 (iv) ANTISENSE: NO
 (v) FRAGMENT TYPE:
 (vi) ORIGINAL SOURCE:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:17:

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|------------|------------|------------|-------------|------------|------------|------|
| GCTGACACGC | TGTCCTCTGG | CGACCTGTGG | TCGGAGAGGT | TGGGCTCCCG | GATGCGCGCG | 60 |
| GGGCTCTGGC | CTCACGGTGA | CCGGCTAGCC | GGCCGCGCTC | CTGCCCTTGA | CCGCCTGCCG | 120 |
| CGGCCCGCGG | GCCTGCTGTT | CTCTCGCGCG | TCCGAGCGTC | CCGACTCCCG | GTGCCGCGCC | 180 |
| GGGTCCGGGT | CTCTGACCCA | CCCGGGGGCG | GCGGGGAAGG | CGGCGAGGGC | CACCGTCCCC | 240 |
| CGTGCGCTCT | CCGCTGCGGG | CGCCCGGGGC | GCCGCACAAC | CCCACCCGCT | GGCTCCGTGC | 300 |
| CGTGCGTGTC | AGGCGTTCTC | GTCTCCGCGG | GGTTGTCCGC | CGCCCCCTTC | CCGGAGTGGG | 360 |
| GGGTGGCCGG | AGCCGATCGG | CTCGCTGGCC | GGCCGGCCTC | CGCTCCCGGG | GGGCTCTTCG | 420 |
| ATCGATGTGG | TGACGTCGTG | CTCTCCCGGG | CCGGGTCCGA | GCCGCGACGG | GCGAGGGGCG | 480 |
| GACGTTCTGT | GCGAACGGGA | CCGTCCCTTC | CGCTCCGCCC | GCGCGGTCCC | CTCGTCTGCT | 540 |
| CCTCTCCCCG | CCCGCCGGCC | GGCGTGTGGG | AAGGCGTGGG | GTGCGGACCC | CGGCCCGACC | 600 |
| TCGCCGTCCC | GCCCGCCGCC | TTCGCTTCGC | GGGTGCGGGC | CGGCGGGGTC | CTCTGACGCG | 660 |
| GCAGACAGCC | CTGCTGTGCG | CCTCCAGTGG | TTGTGCACTT | GCGGGCGGCC | CCCCTCCGCG | 720 |
| GCGGTGGGGG | TGCCGTCCCC | CCGGCCCGTC | GTGCTGCCCT | CTCGGGGGGG | GTTTGCGCGA | 780 |
| GCGTCGGCTC | CGCCTGGGCC | CTTGCGGTGC | TCCTGGAGCG | CTCCGGGTTG | TCCCTCAGGT | 840 |
| GCCCGAGGCC | GAACGGTGGT | GTGTCGTTCC | CGCCCCCGGC | GCCCCCTCCT | CCGGTCGCGC | 900 |
| CCGCGGTGTC | CGCGCGTGGG | TCCTGAGGGA | GCTCGTCGGT | GTGGGGTTTC | AGGCGGTTTG | 960 |
| AGTGAGACGA | GACGAGACGC | GCCCCCTCCA | CGCGGGGAAG | GGCGCCCGCC | TGCTCTCGGT | 1020 |
| GAGCGCACGT | CCCGTGCTCC | CCTCTGGCGG | GTGCGCGCGG | GCCGTGTGAG | CGATCGCGGT | 1080 |
| GGGTTCGGGC | CGGTGTGACG | CGTGCGCCGG | CCGGCCCGCC | AGGGGCTGCC | GTTCTGCCTC | 1140 |
| CGACCGGTTC | TGTGTGGGTT | GACTTCGGAG | GCGCTCTGCC | TCGGAAGGAA | GGAGGTGGGT | 1200 |
| GGACGGGGGG | GCCTGGTGGG | GTTGCGCGCA | CGCGCGCACC | GGCCGGGCCC | CCGCCCTGAA | 1260 |
| CGCGAACGCT | CGAGGTGGCC | GCGCGCAGGT | GTTTCTCGCT | ACCGCAGGGC | CCCCTCCCTT | 1320 |
| CCCCAGGCGT | CCCTCGGCGC | CTCTGCGGGC | CCGAGGAGGA | GCGGCTGGCG | GGTGGGGGGA | 1380 |
| GTGTGACCCA | CCCTCGGTGA | GAAAAGCCTT | CTCTAGCGAT | CTGAGAGGCG | TGCCTTGGGG | 1440 |
| GTACCGGATC | CCCCGGGCCG | CCGCCTCTGT | CTCTGCCTCC | GTTATGGTAG | CGCTGCCGTA | 1500 |
| GCGACCCGCT | CGCAGAGGAC | CCTCCTCCGC | TTCCCCCTCG | ACGGGGTTGG | GGGGGAGAAG | 1560 |
| CGAGGGTTCC | GCCGGCCACC | GCGGTGGTGG | CCGAGTGC GG | CTCGTCGCCT | ACTGTGGCCC | 1620 |
| GCGCCTCCCC | CTTCCGAGTC | GGGGGAGGAT | CCCGCCGGGC | CGGGCCCGGC | GCTCCCAACC | 1680 |
| AGCGGGTTGG | GACGCGGGCG | CCGGCGGGCG | GTGGGTGTGC | GCGCCCGGCG | CTCTGTCCCG | 1740 |
| CGCGTGACCC | CCTCCGTCCG | CGAGTCGGCT | CTCCGCCCGC | TCCCGTGCCG | AGTCGTGACC | 1800 |
| GGTGCCGACG | ACCGCGTTTG | CGTGGCACGG | GGTCGGGCCC | GCCTGGCCCT | GGGAAAGCGT | 1860 |
| CCCACGGTGG | GGGCGCGCCG | GTCTCCCGGA | GCGGGACCGG | GTCGGAGGAT | GGACGAGAAT | 1920 |
| CACGAGCGAG | GGTGTGGTG | GCGTGTCCGG | TTCGTGGCTG | CGGTCTGCTC | GGGGCCCCCG | 1980 |
| GTGGCGGGGC | CCCGGGGCTC | GCGAGGCGGT | TCTCGGTGGG | GGCCGAGGGC | CGTCCGGCGT | 2040 |
| CCCAGGCGGG | GCGCCGCGGG | ACCGCCCTCG | TGTCTGTGGC | GGTGGGATCC | CGCGGCCCGT | 2100 |
| TTTTCTTGGT | GGCCCGGCCG | TGCCTGAGGT | TTCTCCCCGA | GCCGCCGCCT | CTGCGGGCTC | 2160 |
| CCGGGTGCCC | TTGCCCTCGC | GGTCCCCCGC | CCTCGCCCGT | CTGTGCCCTC | TTCCCCGCCC | 2220 |
| GCCGCCCGCC | GATCCTCTTC | TTCCCCCGCA | GCGGCTCACC | GGCTTCACGT | CCGTGTGTGG | 2280 |
| CCCCGCCTGG | GACCGAACC | GGCACGCCT | CGTGGGGCGC | CGCCGCCGGC | CACTGATCCG | 2340 |
| CCCGGCGTCC | GCGTCCCCCG | GCGCGCGCCT | TGGGGACCGG | GTCGGTGGCG | CGCCGCGTGG | 2400 |
| GGCCCGGTGG | GCTTCCCGGA | GGGTTCGGGG | GGTCGGCCTG | CGGCGCGTGC | GGGGGAGGAG | 2460 |
| ACGGTTCCGG | GGGACCGGCC | GCGGCTGCGG | CGGCGGCGGT | GGTGGGGGGA | GCCGCGGGGA | 2520 |
| TCGCCGAGGG | CCGGTCGGCC | GCCCCGGGTG | CCCCGCGGTG | CCGCCGGCGG | CGGTGAGGCC | 2580 |
| CCGCGCGTGT | GTCCCGGCTG | CGGTGCGCCG | CGCTCGAGGG | GTCCCCGTGG | CGTCCCCCTT | 2640 |
| CCCGCCGGCC | GCCTTTCTCG | CGCCTTCCCC | GTCGCCCGCG | CCTCGCCCGT | GGTCTCTCGT | 2700 |
| CTTCTCCCGG | CCCGCTCTTC | CGAACCGGGT | CGGCGCGTCC | CCCGGGTGCG | CCTCGCTTCC | 2760 |
| CGGCCCTTCC | GCGGCCCTTC | CCCGAGGCGT | CCGTCCC CGG | CGTCGGCGTC | GGGGAGAGCC | 2820 |
| CGTCCTCCCC | GCGTGGCGTC | GCCCCGTTTC | GCGCGCGCGT | GCGCCCGAGC | GCGGCCCGGT | 2880 |
| GGTCCCTCCC | GGACAGGCGT | TGCTGCGACG | TGTGGCGTGG | GTCGACCTCC | GCCTTGCCGG | 2940 |
| TCGCTCGCCC | TCTCCCCGGG | TCGGGGGGTG | GGGCCCGGGC | CGGGGCTTCG | GCCCCGGTTC | 3000 |
| CTGCCTCCCG | TCCCGGGCGG | GGGCGGGCGC | GCCGGCCGGC | CTCGGTTCGC | CTCCCTTGGC | 3060 |
| CGTCGTGTGG | CGTGTGCCAC | CCCTGCGCGG | GCGCCCGCGG | GCGGGGCTTC | GAGCCGGGCT | 3120 |
| TCGGCCGGGC | CCCGGGCCCT | CGACCGGACC | GGCTGCGCGG | GCGCTGCGGC | GCGACGGCGC | 3180 |
| GACTGTCCCC | GGGCCGGGCA | CCGCGGTCCG | CCTCTCGCTC | GCCGCCCGGA | CGTCGGGGCC | 3240 |
| GCCCCGCGGG | GCGGGCGGAG | CGCCGTCCCC | GCCTCGCCGC | CGCCCGCGGG | CGCCGGCCGC | 3300 |
| GCGCGCGCGC | GCGTGGCCGC | CGGTCCCTCC | CGGCCGCGCG | GCGCGGGTTC | GGCCGTCCCG | 3360 |
| CTCCTCGCGG | GCGGGCGCGA | CGAAGAAGCG | TCGCGGGTCT | GTGGCGCGGG | GCCCCCGGTG | 3420 |

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|-------------|-------------|-------------|------------|------------|-------------|------|
| GTGGTGTGGC | GTGGGGGGGG | GGTGGTTGGG | GGGTGGGGTT | GGGGGGGGGG | GGGGGGGGGG | 3480 |
| CCACCGGTCC | GGGGGGGGGG | GGGGGGGGGG | GGTGGGGTGG | GGGGGGGGGG | GGGGGGGGGG | 3540 |
| CCGGTGGGTC | GGTGGGGTGG | GGTGGGGTGG | GGTGGGGTGG | GGGGGGGGGG | GGGGGGGGGG | 3600 |
| AGGGGGGGGG | GGGGGGGGGG | GGGGGGGGGG | GGGGGGGGGG | GGGGGGGGGG | GGGGGGGGGG | 3660 |
| TGGTGGATCC | TGGCAGTAGC | ATATGCTTGT | CTCAAAGATT | AAGCCATGCA | TGTCTAAGTA | 3720 |
| CGCACGGCCG | GTACAGTGAA | ACTGCGAATG | GCTCATTAAA | TCAGTTATGG | TGCTTTGGT | 3780 |
| CGTTCGGTCC | TCTCTTACTT | GGATAACTGT | GGTAATTCTA | GAGCTAATAC | ATGCCGACGG | 3840 |
| GCGCTGACCC | CCTTCGCGGG | GGGGATGCGT | GCATTTATCA | GATCAAAACC | AACCCGGTCA | 3900 |
| GCCCCCTCTC | GGCCCCGGCC | GGGGGGCGGG | CGCCGGCGGG | TTTGGTGAAT | CTAGATAACC | 3960 |
| TCGGGGCCGAT | CGCACGGCCC | CCGTGGCGGG | GACGACCCAT | TCGAACGTCT | GCCCTATCAA | 4020 |
| CTTTCGATGG | TAGTTCGCCGT | GCCTACCATG | GTGACCACGG | GTGACGGGGA | ATCAGGGTTC | 4080 |
| GATTCCGGAG | AGGGAGCCTG | AGAAACGGCT | ACCACATCCA | AGGAAGGCAG | CAGGCGCGCA | 4140 |
| AATTACCCAC | TCCCGACCCG | GGGAGGTAGT | GACGAAAAAT | AACAATACAG | GACTCTTTGG | 4200 |
| AGGCCCTGTA | ATTGGAATGA | GTCCACTTTA | AATCCTTTAA | CGAGGATCCA | TTGGAGGGCA | 4260 |
| AGTCTGGTGC | CAGCAGCCGC | GGTAATTCCA | GCTCCAATAG | CGTATATTAA | AGTTGCTGCA | 4320 |
| GTTAAAAAGC | TCGTAGTTGG | ATCTTGGGAG | CGGGCGGGCG | GTCCGCCGCG | AGGCGAGCCA | 4380 |
| CCGCCCCGTC | CCGCCCCCTG | CCTCTCGGCG | CCCCCTCGAT | GCTCTTAGCT | GAGTGTCCCC | 4440 |
| CGGGGGCCGA | AGCGTTTACT | TTGAAAAAAT | TAGAGTGTTC | AAAGCAGGCC | CGAGCCGCCCT | 4500 |
| GGATACCGCA | GCTAGGAATA | ATGGAATAGG | ACCAGCGTTC | TATTTTGTGG | GTTTTTCGGAA | 4560 |
| CTGAGGCCAT | GATTAAGAGG | GACGGCCGGG | GGCATTTCGT | TTGCGCCGCT | AGAGGTGAAA | 4620 |
| TTCTTGGACC | GGCGCAAGAC | GGACCAGAGC | GAAAGCATTT | GCCAAGAATG | TTTTTCATTAA | 4680 |
| TCAAGAACGA | AAGTCGGAGG | TTCGAAGAGC | ATCAGATACC | GTCTAGTTC | CGACCATAAA | 4740 |
| CGATGCCGAC | CGGCGATGCG | CGCGCGTTAT | TCCCATTGAC | CGCCGGGCAG | CTTCCGGGAA | 4800 |
| ACCAAAGTCT | TTGGGTTCGG | GGGGGAGTAT | GGTTGCAAG | CTGAAACTTA | AAGGAATTGA | 4860 |
| CGGAAGGGCA | CCACCAGGAG | TGGAGCCTGC | GGCTTAATTT | GACTCAACAC | GGGAAACCTC | 4920 |
| ACCCGGCCCC | GACACGGACA | GGATTGACAG | ATTGATAGCT | CTTTCTCGAT | TCCGTGGGTG | 4980 |
| GTGGTGCATG | GCCGTCTCTA | GTGGTGGAG | CGATTTGTCT | GTTAATTCTC | GATAACGAAC | 5040 |
| GAGACTCTGG | CATGCTAACT | AGTTACGCGA | CCCCCGAGCG | GTCCGGCTCC | CCCAACTTCT | 5100 |
| TAGAGGGACA | AGTGGCGTTC | AGCCACCCGA | GATTGAGCAA | TAACAGGTCT | GTGATGCCCT | 5160 |
| TAGATGTCCG | GGGCTGCACG | CGCGCTACAC | TGACTGGCTC | AGCGTGTGCC | TACCTACGCG | 5220 |
| CGGCAGGCGC | GGGTAACCCG | TTGAACCCCA | TTCGTGATGG | GGATCGGGGA | TTGCAATTAT | 5280 |
| TCCCCATGAA | CGAGGGAATT | CCCGAGTAAG | TGCGGGTCAT | AAGCTTGCGT | TGATTAAGTC | 5340 |
| CCTGCCCTTT | GTACACACCG | CCCGTCGCTA | CTACCGATTG | GATGGTTTAG | TGAGGCCCTC | 5400 |
| GGATCGGCCC | CGCCGGGGTC | GGCCACCGGC | CCTGGCGGAG | CGCTGAGAA | ACGGTTCGAAC | 5460 |
| TTGACTATCT | AGAGGAAGTA | AAAGTCGTAA | CAAGGTTTCC | GTAGGTGAAC | CTGCGGAAGG | 5520 |
| ATCATTAACG | GAGCCCGGAG | GGCGAGGGCC | GCGGCGCGCG | CGCCGCCGCC | GCGCGCTTCC | 5580 |
| CTCCGCACAC | CCACCCCCCG | ACC CGACCGC | CGCGCGTGGC | CGGGCGGGGC | CCGCGTGGCC | 5640 |
| GTTCCGTTCC | TGCTCGTTTC | GTTCGCCGCC | CGGCCCCGCC | GCCGCGAGAG | CCGAGAACTC | 5700 |
| GGGAGGGAGA | CGGGGGGGAG | AGAGAGAGAG | AGAGAGAGAG | AGAGAGAGAG | AGAGAGAGAA | 5760 |
| AGAAGGGCGT | GTGCTTGGTG | TGCGCGTGTC | GTGGGGCCGG | CGGGCGGGCG | GGAGCGGTCC | 5820 |
| CCGGCCCGCG | CCCCGACGAC | GTGGGTGTCT | CGGGCGGGCG | GGGCGGTCTC | CGGCGGCGTC | 5880 |
| GCGGCGGGTC | TGGGGGGGTC | TGCTGCTCTC | CCTCCCCGCC | GGGGCCCCGT | GTCCGGCCCC | 5940 |
| GCCGCGCCCG | CTCCCCGTCT | TCGGGGCCCG | CCGGAATTCC | GTGCGCTCCG | CCGCGCCGCT | 6000 |
| CCGCGCCGCC | GGGCACGGCC | CCGCTCGCTC | TCCCCGGCCT | TCCCGCTAGG | GCGTCTCGAG | 6060 |
| GGTCCGGGGC | CGGACGCCGG | TCCCCCTCCC | CGCTCTCTCG | TCCGCCCCCC | CGCCGTCCAG | 6120 |
| GTACCTAGCG | CGTTCCGGCG | CGGAGGTTTA | AAGACCCCTT | GGGGGGATCG | CCCGTCCGCC | 6180 |
| CGTGGGTCCG | GGGCGGTGGT | GGGCCCCGCG | GGGAGTCCCG | TCGGGAGGGG | CCCGGCCCTC | 6240 |
| CCCGCGCCTC | CACCGCGGAC | TCCGCTCCCC | GGCCGGGGCC | GCGCCGCCGC | CGCCGCCGCG | 6300 |
| GCGGCCGTCG | GGTGGGGGCT | TTACCCGGCG | GCGGCTCGCG | GCCTGCCGCG | CGTGTGGCGT | 6360 |
| GCGCCCCCGG | CCGTGGGGGG | GGGAACCCCG | GGGCGCTGTT | GGGGTGGTGT | CCGCGCTCGC | 6420 |
| CCCCGCGTGG | CGGGCGCGCG | CCTCCCCGTG | GTGTGAAACC | TTCCGACCCC | TCTCCGGAGT | 6480 |
| CCGTTCCCGT | TTGCTGTCTC | GTCTGGCCCG | CCTGAGGCAA | CCCCCTCTCC | TCTTGGGCGG | 6540 |
| GGGGGGCGGG | GGGACGTGCC | GCGCCAGGAA | GGGCTCCTC | CCGGTGCGTC | GTGCGGAGCG | 6600 |
| CCCTCGCCAA | ATCGACCTCG | TACGACTCTT | AGCGGTGGAT | CACTCGGCTC | GTGCTTCGAT | 6660 |
| GAAGAACGCA | GCTAGCTGCG | AGAATTAATG | TGAATTGCAG | GACACATTGA | TCATCGACAC | 6720 |
| TTCGAACGCA | CTTGCGGGCC | CGGGTTCCTC | CGGGGCTAC | GCCTGTCTGA | GCGTCTCTTG | 6780 |
| CCGATCAATC | CCCCCGGGGG | TGCTTCCGGG | CTCCTCGGGG | TGCGCGGCTG | GGGGTTCCTC | 6840 |
| CGCAGGGCCC | GCCGGGGGCC | CTCCGTCCCC | CTAAGCGCAG | ACCCGGCGGC | GTCCGCCCTC | 6900 |
| CTCTTGCCGC | CGCGCCCGCC | CCTTCCCCCT | CCCCCGCGCG | GCCCTGCGTG | GTACGCGGTC | 6960 |
| GGGTGGCGGG | GGGGAGAGGG | GGGCGCGCCC | GGCTGAGAGA | GACGGGGAGG | GCGGCGCCCG | 7020 |
| CGCCGGAAGA | CGGAGAGGGA | AAGAGAGAGC | CGGCTCGGGC | CGAGTTCCCG | TGGGCGCCCG | 7080 |
| CTGCGGTCCG | GGTTCTCTCC | TCGGGGGGCT | CCCTCGCGCC | GCGCGCGGCT | CGGGGTTCGG | 7140 |
| GGTTCGTCCG | CCCCGGCCGG | GTGGAAGGTC | CCGTGCCCCG | CGTGTGCGTC | GTGCGCGGTC | 7200 |
| GTGCGCGGTG | GGGGCGTGTG | GCGTGCCTGG | TGGTGGTGGG | GGAGGAGGAA | GGCGGGTCCG | 7260 |
| GAAGGGGAAG | GGTGCCGGCG | GGGAGAGAGG | GTGCGGGGAG | CGCGTCCCGG | TCGCGCGGCT | 7320 |

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|------------|------------|-------------|------------|------------|------------|-------|
| TCCGCGCGCG | CGCGCGCGCG | GCGCGCGCGG | GTCCGCGCGG | CCGCGCGCGT | CCGCGCGCGG | 7380 |
| TCCCTCCTCC | CGCGCGCGCG | CCTCCGAGGC | CCGCGCGCGT | CTCCTCGCGG | TCCCGCGCGG | 7410 |
| TACGCGCGCG | CGCGCGCGCG | CCCGGCTCGC | CTCGCGCGCG | GTCCGCGCGG | CCCGGAGCGG | 7440 |
| CGCGCGCGCG | CGCGCGCGCG | GCGCGCGCGC | CGCGGTTCCG | GTGTCGCGCG | CGCGGAGCGG | 7460 |
| CGGGACGCGG | CGGTGTCTCG | CGCGGTCGCG | CGCGCGCGCT | CGGCTCGCGG | CGCGGCGCGG | 7480 |
| CCGCGCGCGG | CGCGCGTCCG | GAGCTTCCCG | GTCCGCGCGG | CGCGGCTCCG | CGCGGCGCGT | 7480 |
| CTCGGACCGG | TCCCGCGGAC | CTCCGCGCGG | GAGACGCGCG | GGGCGGTCCG | CGCGGCGTCC | 7480 |
| CGCGCGCGCG | CGGTGCGCGC | CCCTCCGCGT | GTCCCGCTCC | GGCGGCGCGG | CGCGGCGCGG | 7500 |
| CCGTGCGCGG | CGCGCTCTCT | CTCCCGTCCG | CTCTCCCGCT | CGCGGCGCGG | GTCTCCCGAC | 7500 |
| GGAGCGTCCG | GCGGGCGGTC | GGGCGGCGCG | GATTCCGTCG | GTCCGTCCCG | CGAGCGGCGG | 7520 |
| GTCCCGCTCC | GAGACGCGAC | CTCAGATCAG | ACGTGGCGAC | CCGCTGAATT | TAAGCATATT | 7580 |
| AGTCAGCGGA | GGAAAAGAAA | CTAACCAGGA | TTCCTCAGT | AACGGCGAGT | GAACAGGGAA | 8040 |
| GAGCCACGCG | CCGAATCCCC | GCCCCGCGGG | GCGCGGGACA | TGTGGCGTAC | GGAAAGACCG | 8100 |
| CTCCCGGCGG | CCGCTCGTGG | GGGGCCCCAAG | TCCTTCTGAT | CGAGGCGCGG | CCCGTGGACG | 8160 |
| GTGTGAGGCC | GGTAGCGGCC | GGCGCGCGCC | CGGGTCTTCC | CGGAGTCCGG | TTGCTTGGGA | 8220 |
| ATGCAGCCCA | AAGCGGGTGG | TAAACTCCAT | CTAAGGCTAA | ATACCGGCAC | GAGACCGATA | 8280 |
| GTCAACAGT | ACCGTAAGGG | AAAGTTGAAA | AGAACTTTGA | AGAGAGAGTT | CAAGAGGCGG | 8340 |
| TGAAACCGTT | AAGAGGTAAA | CGGGTGGGGT | CCGCGCAGTC | CGCGCGGAGG | ATTCAACCCG | 8400 |
| GCGCGGGTTC | CGGCCGTGTC | GGCGGCGCGG | CGGATCTTTC | CCGCGCGCGG | TTCCTCCCGA | 8460 |
| CCCTCCACCG | CGCGCTCCCT | TCCCGCGCGG | CCCTCCTCC | TCTCCCGCGG | AGGGGCGCGG | 8520 |
| CTCCGCGCGG | TGCGGGGGTG | GGCGGGGGTG | GCGGGGGTG | GGGTCCGCGG | GGGACCGTCC | 8580 |
| CCCGACCGGC | GACCGCGCGC | CGCGGGGCGC | ATTTCCACCG | CGCGCGGTCC | CCGCGACCGG | 8640 |
| CTCCGGGACG | GCTGGGAAGG | CCCGGCGGGG | AAGGTGGCTC | GGGGGGCCCC | GTCCGTCCGT | 8700 |
| CCGTCTCCT | CCTCCCCCGT | CTCCGCGCGG | CGCGCGCGCG | TCCTCCCTCG | GGAGGCGCGG | 8760 |
| CGGGTCCGGG | CGCGCGCGCG | GGCGCGCGTG | GCGCGCGCGG | CGGGGGCGGC | GGGACCGAAA | 8820 |
| CCCCCCCCGA | GTGTTACAGC | CCCCCGGCA | CGAGACTCG | CCGAATCCCG | GGGCGGAGGG | 8880 |
| AGCGAGACCC | GTCGCGCGCG | TCTCCCCCT | CCCGGCGCGG | ACCGCGCGCG | GGAAATCCCC | 8940 |
| GCGAGGGGGG | TCTCCCCCGC | GGGGGCGCGC | CGGCGTCTCC | TCGTGGGGGG | GCGGGGCCAC | 9000 |
| CCCTCCACAG | GCGCGACCGC | TCTCCACCC | CTCTCCCCCG | CGCGCGCGCG | CCGGCGACCG | 9060 |
| GGGGGGTGCC | GCGCGCGGGT | CGGGGGGGCG | GGCGGACTGT | CCCCAGTGCG | CCCCGGGCGG | 9120 |
| GTGCGCGCGT | CGGGCCCCGG | GGAGGTTCTC | TCGGGGGCCA | GCGCGCGTCC | CCCGAAGAGG | 9180 |
| GGGACGGCGG | AGCGAGCGCA | CGGGGTCCGC | GGCGACGTCG | GCTACCCACC | CGACCGTCT | 9240 |
| TGAAACACGG | ACCAAGGAGT | CTAACACGTG | CGCGAGTCCG | GGGCTCGCAC | GAAAGCCGCC | 9300 |
| GTGGCGCAAT | GAAGGTGAAG | GCCGGCGCGC | TCGCGCGCGG | AGGTGGGATC | CCGAGGCCTC | 9360 |
| TCCAGTCCGC | CGAGGGCGCA | CCACCGGCCC | GTCTCGCGCG | CCGCGCGCGG | GAGGTGGAGC | 9420 |
| ACGAGCGCAC | GTGTTAGGAC | CCGAAAGATG | GTGAACTATG | CCTGGGCGAG | GCGAAGCCAG | 9480 |
| AGGAACTCT | GGTGGAGGTC | CGTAGCGGTC | CTGACGTGCA | AATCGGTCTG | CCGACCTGGG | 9540 |
| TATAGGGGCG | AAAGACTAAT | CGAACCATCT | AGTAGCTGGT | TCCCTCCGAA | GTTTCCCTCA | 9600 |
| GGATAGCTGG | CGCTCTCGCA | GACCGGACCG | ACCGCGCGCA | CGCAGTTTTA | TCCGGTAAAG | 9660 |
| CGAATGATTA | GAGGTCTTGG | GGCGGAAACG | ATCTCAACCT | ATTCTCAAAC | TTTAAATGGG | 9720 |
| TAAGAAGCCC | GGTCTCGTGG | CGTGGAGCCG | GGCGTGGAAT | GCGAGTGCC | AGTGGGCGCG | 9780 |
| TTTTGGTAAG | CAGAACTGGC | GCTGCGGGAT | GAACCGAACG | CCGGGTAAAG | GCGCCCGATG | 9840 |
| CCGACGCTCA | TCAGACCCCA | GAAAAGGTGT | TGGTTGATAT | AGACAGCAGG | ACGGTGGCCA | 9900 |
| TGGAAGTCGG | AATCCGCTAA | GGAGTGTGTA | ACAACCTACC | TGCCGAATCA | ACTAGCCCTG | 9960 |
| AAAATGGATG | GCGCTGGAGC | GTCGGGCCCC | TACCGGCGCG | TCGCGCGCAG | TCGAGAGTGG | 10020 |
| ACGGGAGCGG | CGGGGGGCGG | GCGCGCGCGC | GCGCGTGTGG | TGTGCGTCCG | AGGGCGGCGG | 10080 |
| CGCGGCGCGG | GGCGGGGGTG | TGGGGTCTTT | CCCCCGCCCC | CCCCCGCACG | CCTCCTCCCC | 10140 |
| TCCTCCCGCC | CACGCCCCCG | TCCCCGCCCC | CGGAGCCCCG | CGGACGCTAC | GCCGCGACGA | 10200 |
| GTAGGAGGGC | CGCTGCGGTG | AGCCTTGAAG | CCTAGGGCGC | GGGCCCCGGT | GGAGCCGCGG | 10260 |
| CAGGTGCAGA | TCTTGGTGGT | AGTAGCAAAT | ATTCAAACGA | GAACCTTGA | GGCCGAAGTG | 10320 |
| GAGAAGGGTT | CCATGTGAAC | AGCAGTTGAA | CATGGGTGAG | TCGGTCTCTG | GAGATGGCGG | 10380 |
| AGCGCCGTTT | CGAAGGGACG | GGCGATGGCC | TCCGTTGCCC | TCGGCCGATC | GAAAGGGAGT | 10440 |
| CGGGTTTCAG | TCCCCGAATC | CGGAGTGGCG | GAGATGGGCG | CCGCGAGGCG | TCCAGTGCGG | 10500 |
| TAACGCGACC | GATCCCGGAG | AAGCCGGCGG | GAGCCCCGGG | GAGAGTTCTC | TTTTCTTTGT | 10560 |
| GAAGGGCAGG | GCGCCCTGGA | ATGGGTTTCG | CCCGAGAGAG | GGGCCCCGTC | CTTGGAAGAG | 10620 |
| GTGCGGGTTC | CGGCGGCGTC | CGGTGAGCTC | TCGCTGGCCC | TTGAAAATCC | GGGGGAGAGG | 10680 |
| GTGTAAATCT | CGCGCCGGGC | CGTACCCATA | TCCGCAGCAG | GTCTCCAAGG | TGAACAGCCT | 10740 |
| CTGGCATGTT | GGAACAATGT | AGGTAAGGGA | AGTCGGCAAG | CCGGATCCGT | AACTTCGGGA | 10800 |
| TAAGGATTGG | CTCTAAGGGC | TGGGTCCGTC | GGGCTGGGGC | GCGAAGCGGG | GCTGGGCGCG | 10860 |
| CGCCCGCGGT | GGACGAGGCG | GCGCGCCCCC | CCACGCCCCG | GGCACCCCCC | TCGCGGCCCT | 10920 |
| CCCCCGCCCC | ACCGCGCGCG | GCCGCTCGCT | CCCTCCCCAC | CCCGCGCCCT | CTCTCTCTCT | 10980 |
| CTCTCCCCCG | CTCCCCGTCC | TCCCCCTTCC | CCGGGGGAGC | GCGCGGTGGG | GGCGCGGCGG | 11040 |
| GGGGAGAAGG | GTCCGGGGCG | CAGGGGCGCG | GCGGCGGCGG | CCGGGGCGGC | CGGCGGGGGC | 11100 |
| AGGTCCCCCG | GAGGGGGGCG | CCGGGGACCC | GGGGGGCGCG | CGGCGGCGCG | GACTCTGGAC | 11160 |
| GCGAGCCGGG | CCCTTCCCGT | GGATCGCCCC | AGCTGCGGCG | GGCGTCCGCG | CCGCCCCCGG | 11220 |

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|------------|------------|-------------|-------------|-------------|-------------|-------|
| GGAGCCCGGC | GGCGGCGCGG | CGCGCCCGCC | ACCGCCACCC | CACGTCTCGG | TGCGCGCGGT | 11280 |
| GTCCGCTGGG | GGCGGCGAGG | GTCCGGCGGG | GGCGGTGCGC | GGGCGGCGGG | GGGGGCGGGT | 11340 |
| TGCTCCCGCC | GGCTTACCCC | CCCGGCGCCG | TCCGCCCCCC | GTTCCCCCCT | CCTCCCTCGG | 11400 |
| GGCGGCGGCG | GGCGGCGGCA | GGCGGCGGAG | GGGCGGCGGG | CCGCTCCCCC | CCGCGGCGGT | 11460 |
| CGCCCCCGGG | GGCGCGGTTC | CGCGCGCGCC | TGCGCTCGGC | CGGCGCCTAG | CAGCCGACTT | 11520 |
| AGAACTGGTG | CGGAACAGGG | GAATCCGACT | GTTTAAATTAA | AACAAAGCAT | CGCGAAGGCC | 11580 |
| CGCGGCGGGT | GTTGACGCGA | TGTGATTTCT | GCCCAGTGTCT | CTGAATGTCA | AAGTGAAGAA | 11640 |
| ATTCAATGAA | GGCGGGGTAA | ACGCGCGGGAG | TAACATATGAC | TCTCTTAAGG | TAGCCAAATG | 11700 |
| CCTCGTCATC | TAATTAGTGA | CGCGCATGAA | TGGATGAACG | AGATTCCCAC | TGTCCCTACC | 11760 |
| TACTATCCAG | CGAAACCACA | GCCAAGGGAA | CGGGCTTGGC | GGAATCAGCG | GGGAAAGAA | 11820 |
| ACCCTGTTGA | GCTTGACTCT | AGTCTGGCAC | GGTGAAGAGA | CATGAGAGGT | GTAGAATAAG | 11880 |
| TGGGAGGCCC | CGGCGCCCCC | CCCGGTGTCC | CCGCGAGGGG | CCCGGGGCGG | GGTCCGCGGC | 11940 |
| CCTGCGGGCC | GGCGGTGAAA | TACCACTACT | CTGATCGTTT | TTTCACTGAC | CCGGTGAGGC | 12000 |
| GGGGGGGCGA | GCCCGAGGGG | CTCTCGCTTC | TGGCGCCAA | CGCCCGCCCG | GCCGGGCGCG | 12060 |
| ACCCGCTCCG | GGGACAGTGC | CAGGTGGGGA | GTTTGACTGG | GGCGGTACAC | CTGTCAAACG | 12120 |
| GTAACGCAGG | TGTCTTAAGG | CGAGCTCAGG | GAGGACAGAA | ACCTCCCGTG | GAGCAGAAGG | 12180 |
| GCAAAAGCTC | GCTTGATCTT | GATTTTCAGT | ACGAATACAG | ACCGTGAAAG | CGGGGCCTCA | 12240 |
| CGATCCTTCT | GACCTTTTGG | GTTTAAAGCA | GGAGGTGTCA | GAAAAGTTAC | CACAGGGATA | 12300 |
| ACTGGCTTGT | GGCGGCCAAG | CGTTCATAGC | GACGTGCTTA | TTTGATCCTT | CGTATCTCGG | 12360 |
| TCTTCTATG | ATTGTGAAGC | AGAATTGCGC | AAGCTTTGGA | TTGTTTACCC | ACTAATAGGG | 12420 |
| AACGTGAGCT | GGGTTTAGAC | CGTCGTGAGA | CAGGTTAGTT | TTACCCTACT | GATGATGTGT | 12480 |
| TGTTGCCATG | GTAATCCTGC | TCAGTACGAG | AGGAACCGCA | GGTTCAGACA | TTTGGTGTAT | 12540 |
| GTGCTTGGCT | GAGGAGCCAA | TGGGGCGAAG | CTACCATCTG | TGGGATTATG | ACTGAACGCC | 12600 |
| TCTAAGTCAG | AATCCCGCCC | AGGCGAACGA | TACGGCAGCG | CCGCGGAGCC | TCGGTTGGCC | 12660 |
| TCGATAGACC | GGTCCCCCGC | CTGTCCCCGC | CGCGGGCCCG | CCCCCCCCCT | CACGCGCCCC | 12720 |
| GCCGCGGGAG | GGCGCGTGCC | CCGCCGCGCG | CCGGGACCGG | GGTCCGGTGC | GGAGTGCCCT | 12780 |
| TCGTCTGGG | AAACGGGGCG | CGGCCGGAAG | GGCGGCCGCC | CCCTCGCCCG | TCACGCACCG | 12840 |
| CACGTTCTGT | GGGAACCTGG | CGCTAAACCA | TTCGTAGACG | ACCTGCTTCT | GGGTCCGGGT | 12900 |
| TTCGTACGTA | CGAGAGCAGC | TCCCTCGTGC | CGATCTATTG | AAAGTCAGCC | CTCGACACAA | 12960 |
| GGGTTTGTCC | GCGCGCGCGT | GCGTGCGGGG | GGCCCGGCGG | GCGTGCGCGT | TCGGCGCCGT | 13020 |
| CCGTCTTCTC | GTTCTGTCTT | CTCCCTCCCG | GCCTCTCCCG | CCGACCGCGG | CGTGGTGGTG | 13080 |
| GGGTGGGGGG | GAGGGCGCGC | GACCCCGGTC | GGCCGCCCCG | CTTCTTCCGT | TCCCGCCTCC | 13140 |
| TCCCGGTTCA | CGCCGGGGCG | GCTCGTCCCG | TCCGGGGCCG | GACGGGGTCC | GGGGAGCGTG | 13200 |
| GTTTGGGAGC | CGCGGAGGCG | CCGCGCCGAG | CCGGGCCCCG | TGGCCCGCCG | GTCGCCGTCC | 13260 |
| CGGGGGTTGG | CCGCGCGGCG | CGGTGGGGGG | CCACCCGGGG | TCCCGGCCCT | CGCGCGTCTT | 13320 |
| TCCTCCTCGC | TCCTCCGCAC | GGGTCGACCG | ACGAACCGCG | GGTGGCGGGC | GGCGGGCGGC | 13380 |
| GAGCCCCACG | GGCGTCCCCG | CACCCGGCCG | ACCTCCGCTC | GCGACCTCTC | CTCGGTCCGG | 13440 |
| CCTCCGGGGT | CGACCGCCTG | CGCCCGCGGG | CGTGAGACTC | AGCGGCGTCT | CGCGGTCTCC | 13500 |
| CGGGTCGACC | GCGGCCTTCT | CCACCGAGCG | CGGTGTATAG | AGTGCCCGTC | GGGACGAACC | 13560 |
| GCAACCGGAG | CGTCCCCGTC | TCGGTCGGCA | CCTCCGGGGT | CGACCAGCTG | CCGCCCGCGA | 13620 |
| GCTCCGGACT | TAGCCGGCGT | CTGCACGTGT | CCCGGGTCGA | CCAGCAGGCG | GCCGCCGGAC | 13680 |
| GCAGCGGCGC | ACGCACGCGA | GGGCGTGCAT | TCCCTTTCGC | GCGCCCGCGC | CTCCACCGGC | 13740 |
| CTCGGCCCCG | GGTGGAGCTG | GGACCACGCG | GAACCTCCTC | TCCCACATTT | TTTTACGCCC | 13800 |
| CACCGCGAGT | TTGCGTCCGC | GGGACCTTTA | AGAGGGAGTC | ACTGCTGCCG | TCAGCCAGTA | 13860 |
| CTGCCTCCTC | CTTTTTCGCT | TTTAGGTTTT | GCTTGCCTTT | TTTTTTTTTT | TTTTTTTTTT | 13920 |
| TTTTTTCTTT | CTTTCTTTCT | TTCTTTCTTT | CTTTCTTTCT | TTCTTTCTTT | CGCTTGTCTT | 13980 |
| CTTCTTGTGT | TCTCTTCTTG | CTCTTCTCTT | GTCGTCTCTT | CTCTCTCTCT | CTCTCTCTGT | 14040 |
| CTCTCGCTCT | CGCCCTCTCT | CTCTTCTCTC | TCTCTCTCTC | TCTCTCTCTG | TCTCTCTCTC | 14100 |
| TCGCCCTCTC | TCTCTCTCTT | CTCTCTGTCT | CTCTCTCTCT | CTCTCTCTCT | CTCTCTCTCT | 14160 |
| GTGCTCTCTG | CCCTCTCGCT | CTCTCTCTGT | CTCTGTCTGT | GTCTCTCTCT | CTCCCTCCCT | 14220 |
| CCCTCCCTCC | CTCCCTCCCT | CCCTCCCTTT | CCTTGGCGCG | TTCTCGGCTC | TTGAGACTTA | 14280 |
| GCCGCTGTCT | CGCCGTACCC | CGGGTCGACC | GGCGGGCCTT | CTCCACCGAG | CGGCGTGCCA | 14340 |
| CAGTGCCCGT | CGGGACGAGC | CGGACCCGCC | CTCGGTCCGG | CTCGGTCCGG | ACCTCCGGGG | 14400 |
| TCGACCAGCT | GCCGCCCGCG | AGCTCCGGAC | TTAGCCGGCG | TCTGCACGTG | TCCCGGGTCC | 14460 |
| ACCAGCAGGC | GGCCGCCGGA | CGCAGCGGCG | CACCGACGGA | GGGCGCTGAT | TCCCGTTTAC | 14520 |
| GCGCCCCGCG | CTCCACCGGC | CTCGGCCCGC | CGTGGAGCTG | GGACCACGCG | GAACCTCCCTC | 14580 |
| TCCTACATTT | TTTTACGCCC | CACCGCGAGT | TTGCGTCCCG | GGGACCTTTA | AGAGGGAGTC | 14640 |
| ACTGCTCCCG | TCAGCCAGTA | CTGCCCTCCT | CTTTTTCGCT | TTTTAGGTTTT | GTTTGCCTTT | 14700 |
| TTTTTTTTTT | TTTTTTTTTT | TTTTTTCTTT | CTTTCTTTCT | TTCTTTCTTT | CTTTCTTTCT | 14760 |
| TTCTTTCTTT | CTTTCGCTCT | CGCTCTCTCG | CTCTCTCCCT | CGCTCGTTTC | TTTCTTTCTC | 14820 |
| TTTCTCTCTC | TCTCTCTCTC | TCTCTCTCTC | TCTGTCTCTC | GCTCTCGCCC | TCTCTCTCTC | 14880 |
| TTTCTCTCTC | TCTCTGTCTC | TCTCTCTCTC | TCTCTCTCTC | TCTCTCTCTC | CCTCCCTCCC | 14940 |
| TCCCTCTCCC | TCCCTCTCTC | CCCTCTCTTG | GCGCTTCTCT | GGCTCTTGAG | ACTTAGCCGC | 15000 |
| TGTCTCGCCG | TGTCCCAGGT | CGACCGGCGG | GCCTTCTCCA | CCGAGCGGCG | TGCCACAGTG | 15060 |
| CCCGTCGGGA | CGAGCCGGAC | CCGCCGCGTC | CCCGTCTCGG | TCGGCACCTC | CGGGGTGAC | 15120 |

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|-------------|------------|-------------|------------|-------------|-------------|-------|
| CAGCTGCCGC | CCGCGAGCTC | CGGACTTAGC | CGGCTGTGTC | ACGTGTCCCG | GGTCGACCAG | 15180 |
| CAGGCGGCCG | CCGGACGCTG | CGGCGCACC | ACGCGAGGGC | GTGATTCCG | GTTACGCGC | 15240 |
| CGGCGACCTC | CACCGGCCTC | GGCGCGCGGT | GGAGCTGGGA | CCACGCGGAA | CTCCCTCTCC | 15300 |
| CACATTTTTT | TCAGCCCCAC | CGCGAGTTTG | CGTCCGCGGG | ACTTTTAAGA | GGGAGTCACT | 15360 |
| GCTGCCGTCA | GCCAGTAATG | CTTCCCTCCT | TTTGTCTTTT | TGGTITTTGCC | TTGCGTTTTT | 15420 |
| TTTCTTTCTT | TCTTTCTTTT | TTTCTTTCTT | TCTTTCTTTT | TCTCTCTCTC | TCTCTCTCTC | 15480 |
| TCTCTGTCTC | TCTCTCTCTG | TCTCTCTCCC | CTCCCTCCCT | CCTTGGTGCC | TTCTCGGCTC | 15540 |
| GCTGCTGCTG | CTGCCTCTGC | CTCCACGGTT | CAAGCAAACA | GCAAGTTTTT | TATTTTCGAGT | 15600 |
| AAAGACGTAA | TTTACCATT | TGGCCCGGGC | TGGTCTCGAA | CTCCCGACCT | AGTGATCCGC | 15660 |
| CCGCCTCGGC | CTCCCAAAGA | CTGCTGGGAG | TACAGATGTG | AGCCACCATG | CCCGGCCGAT | 15720 |
| TCCTTCCTTT | TTTCAATCTT | ATTTTCTGAA | CGCTGCCGTG | TATGAACATA | CATCTACACA | 15780 |
| CACACACACA | CACACACACA | CACACACACA | CACACACACA | CACACACCCC | GTAGTGATAA | 15840 |
| AACTATGTAA | ATGATATTTT | CATAATTAAT | ACGTTTATAT | TATGTTACTT | TTAATGGATG | 15900 |
| AATATGTATC | GAAGCCCCAT | TTCATTTACA | TACACGTGTA | TGTATATCCT | TCCTCCCTTC | 15960 |
| CTTCATTCAT | TATTTATTAA | TAATTTTCGT | TTATTTATTT | TCTTTTCTTT | TGGGGCCCGC | 16020 |
| CCGCCTGGTC | TTCTGTCTCT | GCGCTCTGGT | GACCTCAGCC | TCCCAAATAG | CTGGGACTAC | 16080 |
| AGGGATCTCT | TAAGCCCCGG | AGGAGAGGTT | AACGTGGGCT | GTGATCGCAC | ACTTCCACTC | 16140 |
| CAGCTTACGT | GGGCTGCGGT | GCGGTGGGGT | GGGGTGGGGT | GGGGTGGGGT | GCAGAGAAAA | 16200 |
| CGATTGATTG | CGATCTCAAT | TGCCTTTTAG | CTTCATTCAT | ACCCTGTTAT | TTGCTCGTTT | 16260 |
| ATTCTCATGG | GTTCTTCTGT | GTCAATGTCA | CGTTCATCGT | TTGCTTGCCCT | GCTTGCCCTGT | 16320 |
| TTATTTCTCT | CCTTCCTTCC | TTCTTCTCCT | CTTCTCTTCC | TTCTTCTCCT | CCCTCCCTTA | 16380 |
| CTGGCAGGGT | CTTCTCTGTG | CTCTGCCGCC | CAGGATCACC | CCAACCTCAA | CGCTTTGGAC | 16440 |
| CGACCAAACG | GTCGTTCTGC | CTCTGATCCC | TCCCATCCCC | ATTACCTGAG | ACTACAGGCG | 16500 |
| CGACCAACCA | CACCGGCTGA | CTTTTATGTT | GTTTCTCATG | TTTTCCGTAG | GTAGGTATGT | 16560 |
| GTGTGTGTGT | GTGTGTGTGT | GTGTGTGTGT | GTGTGTGTGT | GTGTGTGTGT | GTGTGTATCT | 16620 |
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| GCCACGCTG | GTCTCGAACT | CCTGTCTCTA | AGCAATCCGC | CTGCCCTGCC | CGGCCGCCCA | 16740 |
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| CCTGCCTGCC | TGCCTGCCTA | TCAATCGTCT | TCTTTTTAGT | ACGGATGTCG | TCTCGCTTTA | 16860 |
| TTGTCCATGC | TCTGGGCACA | CGTGGTCTCT | TTTCAAACCT | CTATGATTAT | TATTATTGTA | 16920 |
| GGCGTCACTT | CACGTGTCTG | GGTGATCTCG | AACTTTTAGG | CTCCAGAGAT | CCTCCCGCAT | 16980 |
| CGGCCTCCCC | GAGTGCTGTG | ATGACACGCG | TGGGCACGGT | ACGCTCTGGT | CGTGTITGTC | 17040 |
| GTGGGTCCGT | TCTTTCCGTT | TTTAATACGG | GGACTGCCAA | CGAAGAAAAT | TTTCAGACGC | 17100 |
| ATCTCACCGA | TCCGCCTTTT | CGTCTTTTCT | TTTTATTCTC | TTTAGACGGA | GTTTCACTCT | 17160 |
| TGTCGCCCCAG | GGTGGAGTAC | GATGGCGGCT | CTCGGCTCAC | CGCACCCCTC | GCCTCCCAGG | 17220 |
| TTCAAGTGAT | TCTCCTGCCT | CAGCCTTCCC | GAGTAGCTGG | AATGACAGAG | ATGAGCCATC | 17280 |
| GTGCCCCGGT | AATTTTTCTA | TTTTTAGTAC | AGATGGGGTT | TCTCCATCTT | GGTCAGGCTG | 17340 |
| GTCTTCAACT | TCCGACCGTT | GGAGAATCTT | AACTTTCTTG | GTGGTGGTTG | TTTTCTTTTT | 17400 |
| TCTTTTTTTT | TCTTTCTTTT | TCTTTCTTTT | TCTTCTCTCT | CTCCTCTCTC | TCTTTTCAAT | 17460 |
| CCTCTCTCTC | CTCCTCTCTC | TCTCTCTCTC | TCTCTCTCTC | CTCCTCTCTC | TCTTTTCAAT | 17520 |
| CTTTCAGCTG | GGCTCTCCTA | CTTGTGTGTC | TCTGTGTGTC | ACGCTGGTCT | CAAACCTCTG | 17580 |
| GCCTTGACTC | TTCTCCCGTC | ACATCCGCCG | TCTGGTTGTT | GAAATGAGCA | TCTCTCGTAA | 17640 |
| AATGGAAAAG | ATGAAAAGAA | TAAACACGAA | GACGGAAAAG | ACGGTGTGAA | CGTTTTCTCT | 17700 |
| GCCGTCTCCC | GGGGTGTACC | TTGGACCCGG | AAACCGGAG | GGAGCTTGGC | TGAGTGGGTT | 17760 |
| TTGGGTGCCG | AAACCTCCCG | AGGGCTCCTT | TCCCTCTCCC | CCTTGTCCCC | GCTTCTCCGC | 17820 |
| CAGCCGAGGC | TCCCACCGCC | GCCCCCTGGC | TTTTCCATAG | GAGAGGTATG | GGAGAGGACT | 17880 |
| GACACGCCCT | CCAGATCTAT | ATCCTGCCGG | ACGTCTCTGG | CTCGGCGTGC | CCCACCGGCT | 17940 |
| ACCTGCCACC | TTCCAGGGAG | CTCTGAGGCG | GATGCGACCC | CCACCCCTCC | GTCACGTCCC | 18000 |
| GCTACCCCTC | CCCGGCTGGC | CTTTGCCGGG | CGACCCAGG | GGAACCGCGT | TGATGCTGCT | 18060 |
| TCGGATCCTC | CGGCGAAGAC | TTCCACCGGA | TGCCCCGGGT | GGGCCGGTTG | GGATCAGACT | 18120 |
| GGACCACCCC | GGACCGTGCT | GTTCTTGGGG | GTGGGTGAC | GTACAGGGTG | GACTGGCAGC | 18180 |
| CCCAGCATTG | TAAAGGGTGC | GTGGGTATGG | AAATGTCACC | TAGGATGCCC | TCCTTCCCTT | 18240 |
| CGGTCTGCCT | TCAGCTGCCT | CAGGCGTGAA | GACAACCTCC | CATCGGAACC | TCTTCTCTTC | 18300 |
| CCTTTCTCCA | GCACACAGAT | GAGACGCACG | AGAGGGAGAA | ACAGCTCAAT | AGATACCGCT | 18360 |
| GACCTTCATT | TGTGGAATCC | TCAGTCATCG | ACACACAAGA | CAGGTGACTA | GGCAGGGACA | 18420 |
| CAGATCAAAC | ACTATTTCCG | GGTCTCTGTG | GTGGGATTGG | TCTCTCTCTC | TCTCTCTCTC | 18480 |
| TCTCTCTCTC | TCTCTCTCTC | TCTCTCTCTC | GCACGCGCGC | ACACACACAC | ACAAATTTCCA | 18540 |
| TATCTAGTTT | ACAGAGCACA | CTCACTTCCC | CTTTTCACAG | TACGCAGGCT | GAGTAAAAAC | 18600 |
| CGCCCCACCC | TCCACCCGTT | GGCTGACGAA | ACCCCTTCTC | TACAATTGAT | GAAAAAGATG | 18660 |
| ATCTGGGCCG | GGCAGCTAG | CTCACGCCCT | TCACTCCGGC | ACTTTGGGAG | GCCGAGCGCG | 18720 |
| GTGGATCGCT | TGGGGCCGGG | AGTTCGAGAC | CAGGCTGGCC | GACGTGGCGA | AACCCCGTCT | 18780 |
| CTCTGAAAAA | TAGAACGATT | AGCCGGGCCCT | GGTGGCGTGG | GCTTGGGAAT | ACGACCGCTC | 18840 |
| GGGAGACTGG | GGCGGGCGAC | TTGTTCCAAC | CGGGGAGGCC | GAGGCCGCGA | TGAGCTGAGA | 18900 |
| TCGTGCCGTG | GCGATGCGGC | CTGGATGACG | GAGCGAGACC | CCGTCTCGAG | AGAATCATGA | 18960 |
| TGTTATTATA | AGATGAGTTG | TGCGCGGTGA | TGGCCGCTGT | TAGTCCGCGC | TACTCGGGAG | 19020 |

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| GCTGAGACGA | GGAGAAGATC | ACTTGAGGCC | CCACAGGTCC | AGGCTTCGGT | CGGCGGTGAC | 19030 |
| CCACTGTATC | CTGGGCAGTC | ACCGGTCAAG | GAGATATGCC | CCTTCCCCGT | TIGTTTTTCT | 19140 |
| TTTCTTCCCT | TCTCTTTTCT | TCTTTTGTCT | TCTTTTTTCT | TTCTTTCTTT | CTTTCTTTCT | 19200 |
| TTCTTTCTTT | CTTTCTTTCT | TTTTCTTTTT | CTCTCTTCCC | CTCTTTCTTT | CCTGCTTCCC | 19300 |
| TBCCCTTTCT | CTTTCTTTCT | TTCTCTCTCT | CCTCCCTTCC | TTCTTTCTCT | CGGCTTCAGC | 19320 |
| CTCCCAAAGT | GCTGGGATGA | CTGGCGGGAG | GCACCATGCC | TGCTTGCCCC | AAAGAGACCC | 19380 |
| TCTTGGAAG | TGAGACGCAG | AGAGCGCCTT | CCAGTGATCT | CATTGACTGA | TTTAGAGACG | 19440 |
| GCATCTCGCT | CCGTACCCCC | GGCAGTGGTG | CCGTCTGAAC | TCACTCCCTG | CAGCGTGGAC | 19500 |
| GCTCCTGGAC | TCGAGCGATC | CTTCCACCTC | AGCCTCCAGA | GTACAGAGCC | TGGGACCCTG | 19560 |
| GSCACGCGCC | ACTGTGCCCC | CACCGTTTTT | AATTGTTTTT | TTTTCCCCCG | AGACAGAGTT | 19620 |
| TCACTCTCGT | GGCCTAGACT | GCAGTGGGT | GGCGCGATCT | TGGCTCACCG | CAACCTCTGC | 19680 |
| CTCCCGGTTT | CAAGCGATTG | TCCTGCATCG | GCCTCCTGAG | TAGCCGSGAT | TGCGGGCATG | 19740 |
| CGCTGCCACG | TCTGGCTGAT | TTCTGATTTT | TAGTGGAGAC | GCGGCTTCTC | CATGTCGATC | 19800 |
| GGGCTGGTTT | CGAACTCCCC | ACCTCAGGTG | ATCCGCCCTC | CCCGGCCTCC | GGAAGTGCTG | 19860 |
| GGATGACAGG | CGTAGGCCAC | CGCGCCCGGC | CTTCATTTT | AAATGTTTTT | CCACAGACGG | 19920 |
| GGTCTCATCA | TTTCTTTTGA | ACCCTCCTGC | CCGGCGTCTC | AAAGTGCTGG | CGTGACGGGC | 19980 |
| GTGAGCCACT | GCGCCTGGAC | TCCGGGGAAT | GACTCACGAC | CACCATCGCT | CTACTGATCC | 20040 |
| TTTCTTTCTT | TCTTTCTTTT | TTTCTTTCTT | TCTTTCTTTT | TTTCTTTCTT | TCTTTCTTGA | 20100 |
| TGAATTATCT | TATGATTTAT | TTGTGTACTT | ATTTTCAGAC | GGAGTCTCGC | TCTGGGCGGG | 20160 |
| GCGAGGCGAG | GCGAGGCACA | GCGCATCGCT | TTGGAAGCCG | CGGCAACGCC | TTTCAAAGCC | 20220 |
| CCATTTCGTAT | GCACAGAGCC | TTATTCCCTT | CCTGGAGTTG | GAGCTGATGC | CTTCCGTAGC | 20280 |
| CTTGGGCTTC | TCTCCATTCC | GAAGCTTGAC | AGGCGCAGGG | CCACCAGAG | GCTGGCTGCG | 20340 |
| GCTGAGGATT | AGGGGGTGTG | TTGGGGCTGA | AAACTGGGTC | CCCTATTTTT | GATACCTCAG | 20400 |
| CCGACACATC | CCCCGACCGC | CATCGCTTGC | TGCGCCTCTG | AGATCCCCCG | CCTCCACCGC | 20460 |
| CTTGACGGCT | CACCTCTTAC | TTTCATTTCT | TCTTTCTTTG | CGTTTGAGGA | GGGGTAAGGA | 20520 |
| GAATGAGGGT | GTGTGTGGGG | AGGGGGTGCG | GGGTGGGGAC | GGAGGGGAGC | GTCCTAAGGG | 20580 |
| TCGATTTAGT | GTCATGCCTC | TTTCACCACC | ACCACCACCA | CCGAAGATGA | CAGCAAGGAT | 20640 |
| CGGCTAAATA | CCGCGTGTTC | TCATCTAGAA | GTGGGAACCT | ACAGATGACA | GTTCTTGCTG | 20700 |
| GGGCAGAACG | AGGGGGACCG | GGGACGCGGA | AGTCTGCTTG | AGGGAGGAGG | GGTGGAAGGA | 20760 |
| GAGACAGCTT | CAGGAAGAAA | ACAAAACACG | AATACTGTCT | GACACAGCAC | TGACTACCCG | 20820 |
| GGTGATGAAA | TCATCTGCAC | ACTGAACACC | CCCGTCACAA | GTTTACCTAT | GTCACAATCT | 20880 |
| TGCACATGTA | TCGCTTGAAC | GACAAATAAA | AGTTAGGGGG | GAGAAGAGAG | GAGAGAGAGA | 20940 |
| GAGAGAGAGA | GACAGAGAGA | GACAGAGAGA | GAGAGAGAGG | AGGGAGAGAG | GAAAACGAAA | 21000 |
| CACCACCTCC | TTGACCTGAG | TCAGGGGGTT | TCTGGCCTTT | TGGGAGAACG | TTCAGCGACA | 21060 |
| ATGCAGTATT | TGGGCCCGTT | CTTTTTTTTT | CTTCTTCTTT | TCTTTCTTTT | TTTTTGGACT | 21120 |
| GAGTCTCTCT | CGCTCTGTCA | CCCAGGCTGC | GGTCGCGGTG | GCGCTCTCTC | GGCTCACTGA | 21180 |
| AACCTCTGCT | TCCCGGGTTC | CAGTGATTCT | TCTTCGGTAG | CTGGGATTAC | AGGCGCACAC | 21240 |
| CATGACGGCG | GGCTCATATT | CCTATTTTCA | GTAGAGACGG | GGTTTCTCCA | CGTTGGCCAC | 21300 |
| GCTGGTCTCG | AACTCCTGAC | CTCAAATGAT | CCGCCTTCTT | GGGCCCTCCA | AAGTGCTGGA | 21360 |
| AACGACAGGC | CTGAGCCGCC | GGGATTTTCA | CCTTTAAAG | CGCGGCCCTG | CCACCTTTCT | 21420 |
| CTGTGGCCCT | TACGCTCAGA | ATGACGTGTC | CTCTCTGCCG | TAGGTGACT | CCTTGAGTCC | 21480 |
| CCTAGGCCAT | TGCACTGTAG | CCTGGGCAGC | AAGAGCCAAA | CTCCGNCCCC | CCACCTCTCT | 21540 |
| GCGCACATAA | TAACATACTA | ACAACTAAAC | TAACATACTA | AACTAACTAA | CTAATACTAA | 21600 |
| TCTCTACACG | TCACCCATAA | GTGTGTGTTT | CCGTGAGAGT | GATTTCTAAG | AAATGGTACT | 21660 |
| GTACACTGAA | CGCAGTGGCT | CACGTCTGTC | ATCCCGAGGT | CAGGAGTTCG | AGACCAGCCC | 21720 |
| GGCCAACGTG | GTGAAACCCC | GTCTCTACTG | AAAATACGAA | ATGGAGTCAG | GCGCCGTGGG | 21780 |
| GCAGGCACCT | GTAAACCCAG | CTACTCGGGA | GGCTGGGGTG | GAAGAATTGC | TTGAACCTGG | 21840 |
| CAGGCGGAGG | CTCAGTGCAC | CCAAGATGCG | ACCATGTCAC | TACAGCCTGG | GCGACAGAGT | 21900 |
| GAGACCCGGT | CTCCAGATAA | ATACGTACAT | AAATAAATAC | ACACATACAT | ACATACATAC | 21960 |
| ATACATACAT | ACATACATAC | ATCCATGCAT | ACAGATATAC | AAGAAAGAAA | AAAAGAAAAG | 22020 |
| AAAAGAAAAG | GAAAATGAAA | GAAAAGGCAC | TGTATTGCTA | CTGGGCTAGG | GCCTTCTCTC | 22080 |
| TGTCTGTTTC | TCTCTGTTTC | TCTCTGTCTT | TCTCTCTGTG | TCTCTTTCTC | TGTCTGTCTG | 22140 |
| TCTCTTTCTT | TCTCTCTGTC | TCTGTCTCTG | TCTTTGTCTC | TCTCTCTCCC | TCTCTGCTTG | 22200 |
| TCTCACTGTG | TCTGTCTTCT | GTCTTACTCT | CTTTCTCTCC | CCGTCTGTCT | CTCTCTCTCT | 22260 |
| CTCTCCCTCC | CTGTTTGTTC | CTCTCTCTCC | CTCCCTGTCT | GTTTCTCTCT | CTCTCTTTCT | 22320 |
| GTCTGTTTCT | GTCTCTCTCT | GTCTGTCTAT | GTCTTTCTCT | GTCTGTCTCT | TTCTCTGTCT | 22380 |
| GTCTGCCTCT | CTCTTTCTTT | TTCTGTGTCT | CTCTGTGGGT | CTCTCTCTCT | CTGTCTGTCT | 22440 |
| GCTGTCTCTT | CTCTCTCTCT | CTCTGTGCTT | ATCTCTGTCT | TTACTCTCTT | TCTCTGCTTG | 22500 |
| TCTGTCTGTC | TCTCCCTCCC | TTTCTGTTTC | TCTCTCTCTC | TCTCTCTCTC | TCCCCCTCTC | 22560 |
| CCTGTCTGTT | TCTCTCCGTC | TCTCTCTCTT | TCTGTCTGTT | TCTCACTGTC | TCTCTCTGTC | 22620 |
| CATCTCTCTC | TCTCTCTGTC | TGTCTCTTTC | GTTCTCTCTG | TCTGTCTGTC | TCTCTCTCTC | 22680 |
| TCTCTCTCTC | TCTCTCTCTC | TCCCTGTCTG | TCTGTTTCTC | TCTATCTCTC | GCTGTCCATC | 22740 |
| TCTGTCTTTC | TATGTCTGTC | TCTTTCTCTG | TCAGTCTGTC | AGACACCCCC | GTGCCGGGTA | 22800 |
| GGGCCCTGCC | CCTTCCACGA | AAGTGAGAAG | CGCGTGCTTC | GGTGCTTAGA | GAGGCCGAGA | 22860 |
| GGAATCTAGA | CAGGCGGGCC | TTGCTGGGCT | TCCCCACTCG | GTGTATGATT | TCGGGAGGTC | 22920 |

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|-------------|------------|-------------|------------|------------|-------------|-------|
| GAGGCGGGGT | CCCCGCTTGG | ATGCGAGGGG | CATTTTCAGA | CTTTTCTCTC | GGTACGTGT | 22980 |
| GGGCTCCGTA | CTTCTCCTAT | TTCCCGGATA | AGCTCCTCGA | CTTCAACATA | AACGGCGTCC | 23010 |
| TAAAGGTGCGA | TTTAGTGTCA | TGCCTCTTTC | ACCGCCACCA | CCGAAGATGA | AAGCAAAGAT | 23100 |
| CGGCTAAATA | CCGCGTGTTC | TCATCTAGAA | GTGGGAACCT | ACAGATGACA | GTTCTTGCAT | 23160 |
| GGGCGAAGC | AGGGGGACCG | GGNACGCGGA | AGCCTGCTTG | AGGRRGGAGG | GGYGGAAAG3A | 23220 |
| GAGACAGCTT | CAGGAAGAAA | ACAAAACACG | AATACTGTCT | GACACAGCAC | TGACTACCCG | 23280 |
| GGTGATGAAA | TCATCTGCAC | ACTGAACACC | CCCGTCACAA | GTTTACCTAT | GTCACAGTCT | 23340 |
| TGCTCATGTA | TGCTTGAACG | ACAAATAAAA | GTTCCGGGGG | GAGAAGAGAG | GAGAGAGAGA | 23400 |
| GAGAGACGGG | GAGAGAGGGG | GGAGAGGGGG | GGGGAGAGAG | AGAGAGAGAG | AGAGAGAGAG | 23460 |
| AGAGAGAGAG | AGAAAGAGAA | GTAAACCAA | CCACCACCTC | CTTGACCTGA | GTCAGGGGGT | 23520 |
| TTCTGGCCTT | TTGGGAGAAC | GTTCAGCGAC | AATGCAGTAT | TTGGGCCCCG | TCTTTTTTTC | 23580 |
| TTCTTCTTCT | TTTCTTTCTT | TTTTTTTGGG | CTGAGTCTCT | CTCGCTCTGT | CACCCAGGCT | 23640 |
| GCGGTGCGGT | GGCGCTCTCT | CGGCTCACTG | AAACCTCTGC | TTCCCGGGTT | CCAGTGATTC | 23700 |
| TTCTTCGGTA | GCTGGGATTA | CAGGTGCGCA | CCATGACGGC | CGGCTCATCG | TTCTATTTTT | 23760 |
| AGTAGAGACG | GGGTTTCTCC | ACGTTGGCCA | CGCTGGTCTC | GAACCTCTGA | CCACAAATGA | 23820 |
| TCCACCTTCC | TGGGCCTCCC | AAAGTGCTGG | AAACGACAGG | CCTGAGCCGC | CGGGATTTC | 23880 |
| GCCTTTAAAA | GCGCGCGGCC | CTGCCACCTT | TGCTGTCGGC | CCTTACGCTC | AGAATGACGT | 23940 |
| GTCCTCTCTG | CCATAGGTTG | ACTCCTTGAG | TCCCCTAGGC | CATTGCACTG | TAGCCTGGGC | 24000 |
| AGCAAGAGCC | AAACTCCGTC | CCCCCACCTC | CCCGCGCACA | TAATAACTAA | CTAACTAACT | 24060 |
| AACTAACTAA | AATCTCTACA | CGTCACCCAT | AAGTGTGTGT | TCCCGTGAGG | AGTGATTTCT | 24120 |
| AAGAAATGGT | ACTGTACACT | GAACGACAGG | TTCACGTCTG | TCATCCCAGG | GTCAGGAGTT | 24180 |
| CGAGACCAGC | CCGGCCACAG | TGGTGAAACC | CCCGTCTCTA | CTGAAAATAC | GAAATGGAGT | 24240 |
| CAGGCGCCGT | GGGGCAGGCA | CCTGTAACCC | CAGCTACTCG | GGAGGCTGGG | GTGGAAGAAT | 24300 |
| TGCTTGAACC | TGGCAGGCGG | AGGCTGCAGT | GACCCAAGAT | CGCACCACCT | CACTACAGCC | 24360 |
| TGGGCGACAG | AGTGAGACCC | GGTCTCCAGA | TAAATACGTA | CATAAATAAA | TACACACATA | 24420 |
| CATACATACA | TACATACAAC | ATACATACAT | ACAGATATAC | AAGAAAGAAA | AAAAGAAAAG | 24480 |
| AAAAGAAAGA | GAAAATGAAA | GAAAAGGCAC | TGTATTGCTA | CTGGGCTAGG | GCCTTCTCTC | 24540 |
| TGTCTGTTTT | TCTCTGTTCC | TCTCTGTCTT | TCTCTCTGTG | TCTCTTTCTC | TGTCTGTCTG | 24600 |
| TCTGTCTGTC | TGTCTGTCTC | TTTCTTTCTT | TCTGTCTCTG | TCTTTGTCCC | TCTCTCTCCC | 24660 |
| TCTCTGCCCT | GTCTCACTGT | GTCTGTCTTC | TATCTTACTC | TCTTTCTCTC | CCCGTCTGTC | 24720 |
| TCTCTCTCAC | TCCCTCCCTG | TCTGTTTCTC | TCTCTCTCTC | TTCTGTCTCT | TTCTGTCTCT | 24780 |
| TCTCTGTCTG | CCTCTCTCTT | TCTCTATCTG | TCTCTTTCTC | TGTCTGTCTG | CCCTCTCTCT | 24840 |
| TCTTTTCTCT | TGTCTCTCTG | TCTGTCTCTC | TCTCTCTCTG | TGCTATCTTT | CTGTCTTACT | 24900 |
| CTCTTTCTCT | GCCTGTCTGT | CTGTCTCTCT | CTGTCTCTCC | CTCCCTTTCT | GCTTCTCTCT | 24960 |
| CTCTCTCTCT | CTCTNNNCCC | TCCCTGTCTG | TTCTCTCTCT | TCTCCCTCTC | TTTCTGTCTG | 25020 |
| TTTCTCACTG | TCTCTCTCTG | TCTGTCTGTT | TCATTCTCTC | TGTCTCTGTC | TCTGTCTCTC | 25080 |
| TCTCTCTCTG | TCTCTCCCTC | TCTGTGTGTA | TCTTTTGTCT | TACTCTCCTT | CTCTGCCTGT | 25140 |
| CCGTCTGTCT | GTCTGTCTCT | CTCTCTCCCT | GTCCTCTCT | CTTTCTGTCT | GTTTCTCTCT | 25200 |
| CTCTCTCTCT | CTCTCTCTCT | CTGTCTCTGT | CTTCTCTGT | CTGTCCCTTT | CTCTGTCTGT | 25260 |
| CTGCCCTCTCT | CTTTCTCTTT | CTGTGTCTCT | CTGTCTCTCT | CTCTGTGCTT | ATCTTCTGTC | 25320 |
| TTACTCTCTT | TCTCTGCCTG | TCTATCTGTC | TGTCTCTCTC | TGTCTCTCTC | CCTGCCTTTC | 25380 |
| TGTTTCTCTC | TCTCTCCCTC | TCTCGCTCTC | TCTGTCTTTC | TCTCTTTCTC | TCTGTTTCTC | 25440 |
| TGTCTCTCTC | TGTCCGCTCT | TGTCTTTTTT | TGTCTGTCTG | TCTCTCTCTT | TCTTTCTGTC | 25500 |
| GTCTGTCTCT | GTCTCTGTCT | CTGTCTCTCT | CTCTCTCTCT | CTCCTTGTCT | CTCTCACTGT | 25560 |
| GTCTGTCTCT | TGTCTTACTC | TCCTTCTCTG | CCTGTCCATC | TGTCTGTCTG | TCTCTCTCTC | 25620 |
| TCTCTCCCTA | CCTTCTGTGT | TCTCTCTCGC | TAGCTCTCTC | TCTCTCTGCC | TGTTTCTCTC | 25680 |
| TTTCTCTCTC | TGTCTTTCTC | TGTCTGTCTC | TTTCTCTGTC | TGTCTGTCTC | TTTCTCTCTG | 25740 |
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| ATCTTCTGTC | TTACTCTGTT | TCCTTGCCCTG | CCTGCCTGTC | TGTGTGTCTG | TCTCTCTCTC | 26040 |
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| TGTGTGTCTG | TCTTCTGTCT | TACTCTCCTT | CTCTGCCTGT | CCGTCTGTCT | GTCTGTCTCT | 26280 |
| CCCTCTCTCT | CCCTCCCTTT | CTGTTTCTCT | CTCTCTCTCT | TTCTGTCTGT | TTCTCTCTTT | 26340 |
| CTCTCTCTGT | CTGTCTCTTT | CTCTGTCTGT | CTGTCTCTCT | CTTTCTTTT | CTCTGTCTCT | 26400 |
| CTGTCTCTCT | CTGTGTCTGT | CTCTCTGTCT | TGTCCTATCT | TCTGTCTTAC | TCTCTTTCTC | 26460 |
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| TCTCTTTCTT | TTTCTCTGTC | TCTCTGTCTC | TCTCTGTGTC | TGTCTCTCTT | TCTGTGCCTA | 26640 |
| TCTTCTGTCT | TACTCTCTTT | CTCTGGCTGT | CTGCCTGTCT | CTCTCTCTCT | GCCTGTCTCC | 26700 |
| GTCCCTCCCT | CCCTGTCTGT | CTGTTTCTCT | CTGTCTCTCT | CTCTCTCTCT | CCATCTCTGT | 26760 |
| CTGTCTCTTT | CTCTTTCTCT | CTCTCTGTCT | CTGTCTCTCT | CTCTCTCTCT | CTGTCTCTCT | 26820 |

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|------------|------------|------------|-------------|------------|------------|-------|
| CACTGTGTCT | GTCTTCTGTC | TTACTCTCTT | TCTCTTGCCT | GCCTCTCTGT | CTGTCTGTCT | 26380 |
| CTCTCCCTCC | ATGTCTCTCT | CTCTCTCTCA | CTCACTCTCT | CTCCGTCTCT | CTCTCTTTCT | 26940 |
| GTCTGTTTCT | CTCTCTGTCT | GTCTCTCTCC | CTCCATGTCT | CTCTCTCTCT | CTCTCACTCA | 27000 |
| CTCTCTCTCC | GTCTCTCTCT | CTCTTTCTGT | CTGTTTCTCT | CTCTGTCTGT | CTCTCTCCCT | 27060 |
| CCATGTCTCT | CTCTCTCCCT | CTCACTCACT | CTCTCTCCGT | CTCTCTCTCT | CTTTCTGTCT | 27120 |
| GTTTCTTTGT | CTGTCTGTCT | GTCTGTCTGT | CTGTCTCTCT | CTCTCTCTCT | CTCTCTCTCT | 27180 |
| CTCTCTGTTT | GTCTTTCTCC | CTCCCTGTCT | GTCTGTCTGT | CTCTCTCTCT | CTGTCTCTGT | 27240 |
| CTCTGTCTCT | CTCTCTTTCT | CTTTCTGTCT | GTTTCTCTCT | ATCTCTCGCT | GTCCATCTCT | 27300 |
| GTCTTTCTAT | GTCTGTCTCT | TTCTCTGTCA | GTCTGTCTAGA | CACACCCGTG | CCGGTAGGGC | 27360 |
| CCTGCCCTTC | CACGAGAGTG | AGAAGCGCGT | GCTTCGGTGC | TTAGAGAGGC | CGAGAGGAAT | 27420 |
| CTAGACAGGC | GGGCTTGTCT | GGGCTTCCCC | ACTCGGTGTA | CGATTTCCGG | AGGTCCGAGC | 27480 |
| CGGGTCCCCG | CTTGATGCG | AGGGGCATTT | TCAGACTTTT | CTCTCGGTCA | CGTGTGCGCT | 27540 |
| CCGTACTTCT | CCTATTTCCC | CGATAAGTCT | CCTCGACTTC | AACATAAACT | GTAAAGCCCG | 27600 |
| GACGCCAACA | CGGCGAAACC | CCGTCTCTAC | TAAAAATACA | AAGCTGAGTC | GGGAGCGGTG | 27660 |
| GGGCAGGCC | TGTAATGCCA | GCTCCTCGGG | AGGCTGAGGC | GGGAGAATCG | CTTGAACCAG | 27720 |
| GGAAGCGGAG | GCTGCAGGGA | GCCGAGATCG | CGCCACTGCA | CTACGGCCCA | GGCTGTAGAG | 27780 |
| TGAGTGAGAC | TCGGTCTCTA | AATAAATACG | GAAATTAATT | AATTCATTAA | TTCTTTTCCC | 27840 |
| TGCTGACGGA | CATTTGCAGG | CAGGCATCGG | TTGTCTTCGG | GCATCACCTA | GCGGCCACTG | 27900 |
| TTATTGAAAG | TCGACGTTGA | CACGAGGGGA | GGTCTCGCCG | ACTTCACCGA | GCCTGGGGCA | 27960 |
| ACGGGTTTCT | CTCTCTCCCT | TCTGGAGGCC | CCTCCCTCTC | TCCCTCGTTG | CCTAGGGAAC | 28020 |
| CTCGCCTAGG | GAACCTCCGC | CCTGGGGGCC | CTATTGTTCT | TTGATCGGCG | CTTTACTTTT | 28080 |
| CTTTGTGTGT | TGGCGCCTAG | ACTCTTCTAC | TTGGGCTTTG | GGAAGGGTCA | GTTTAATTTT | 28140 |
| CAAGTTGCC | CCCGCTCCC | CCCCTACCC | ACGTCCCTTC | ACCTTAATTT | AGTGAGCCGG | 28200 |
| TTAGGTGGGT | TTCCCCCAAA | CCGCCCCCCC | CCCCCGCCT | CCCAACACCC | TGCTTGGAAG | 28260 |
| CCTTCCAGAG | CCACCCCGGT | GTGCCTCCGT | CTTCTCTCCC | CTTCCCCCAC | CCCTTGCCGG | 28320 |
| CGATCTCATT | CTTGCCAGGC | TGACATTTGC | ATCGGTGGGC | GTCAGGCCTC | ACTCGGGGGC | 28380 |
| CACCGTTTTT | GAAGATGGGG | GCGGCACGGT | CCCCTTCCC | CGGAGGCAGC | TTGGGCCGAT | 28440 |
| GGCATAGCCC | CTTGACCCGC | GTGGGCAAGC | GGGCGGTCT | GCAGTTGTGA | GGCTTTTCCC | 28500 |
| CCCGCTGCTT | CCCGCTCAGG | CCTCCCTCCC | TAGGAAAGCT | TCACCCTGGC | TGGGTCTCGG | 28560 |
| TCACCTTTTA | TCACGATGTT | TTAGTTTCTC | CGCCCTCCGG | CCAGCAGAGT | TTCACAATGC | 28620 |
| GAAGGGCGCC | ACGGCTCTAG | TCTGGGCCCT | CTCAGTACTT | GCCCCAAATA | GAAACGTTTT | 28680 |
| CTGAAAACCT | ATAACTTTNC | TCACCTAAGA | TTTTCCAGGA | CGGCGCCTTG | GCCCTGTGTT | 28740 |
| GTTGGCTTGT | TTTGTTCGT | TCTGTTTGT | TTTGTTCGTG | TTTTTCCTTT | CTCGTATGTC | 28800 |
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| CACGTTAGCT | GCCGTTTTTT | CCTGTTGTGA | ACTAGCGCTT | TTGTGACTCT | CTCAACGCTG | 28920 |
| CAGTGAGAGC | CGGTTGATGT | TTACNATCCT | TCATCATGAC | ATCTTATTTT | CTAGAAATCC | 28980 |
| GTAGGCCAAT | GCTGTGCTG | CTCTGTGTC | TCTTGTGTT | GTTGTTGTTG | TGCTGTTGTC | 29040 |
| TGTTGTCTGT | GTCGTTGTTG | TTGTCTGTT | CGTTGTTTTT | AAAGTATACC | CCGGCCACCG | 29100 |
| TTTATGGGAT | CAAAAGCATT | ATAAAATATG | TGTGATTATT | TCTTGAGCAC | GCCCTTCCTC | 29160 |
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| CTCTCTCTCT | CTGTGTCTCT | CTCTCTCTGC | CTGTCTGTTT | CTCTCTCTCT | GCCTCTCTCT | 29280 |
| CTCTCTCTCT | CTCTGCCTGT | CTCTCTCACT | GTGTCTGTCT | TCTGTCTTAC | TCCCTTTCTC | 29340 |
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| TTTCTTTCTC | TCTGTCTCTC | TCTGCCTGTC | TCTCTCACTC | TGTCTTCTGT | CTTATCTCTC | 29520 |
| TCTCTGCCTG | CCTGTCTCTC | TCACTCTCTC | TCTCTCTGTC | TCTCTCTCTC | TCTTCTGTT | 29580 |
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| CTCTCTCTCT | CTCCCTGTCT | GTCTGTCTCT | CTCTCTCTCT | CCCCCTGTCT | GTTTCTCTCT | 29760 |
| CTCTCTCTCT | CTCTCTCTCT | CTCTGTCTTT | GTCTTTCTTT | CTGTCTCTGT | CTCTCTCTCT | 29820 |
| CTCTCTGTGT | CTCTGTCTCT | TGCTTACTCT | TCTTCTCTCT | CCTGTCTGTC | TGTCTGTCTC | 29880 |
| TCTCTGTCTG | TCTCTCTCTC | TCTCTCCCCC | TGTCTGCTGT | TTCTCTGTCT | CTGTCTGTGT | 29940 |
| CTCTCTTTCT | GTCTGTTTCT | CTCTGTCTGT | CTTTCTCTCT | CTGTCTCTTT | CTCTCTGTCT | 30000 |
| CTCTGTCTGT | CTCTGTCTCT | CTCTGTCTCT | CTCTCTCTCT | GTGGGGGTGT | GTGTGTGTGT | 30060 |
| GTGTATGTGT | GTTGTGTGTG | GTGTGTGTGT | CTGCCCTCTG | TCTTACTCTC | TTTCTCTGCC | 30120 |
| TGCTGTCTG | CCTGTCTGTT | TGTCTCTCTC | TCTCTGCTGT | TCTCTCTCCC | TTCCGTCTGT | 30180 |
| TTTCTCTCTC | TTTCTGTTTC | TCTCTGTCTC | TGTCCATCTC | TGTCTTTCTC | CGTCTGTCTC | 30240 |
| TTTATCTGTC | TCTCTCCGTC | TGTCTCTTTA | TCTGTCTCTC | TCTCTCTTTC | TGTCTTTCTC | 30300 |
| TCTCTGTGTA | TGTTGTCTCT | TCTCTGTCTG | TCTCTGTCTC | TGTCTCTCTG | TCTCTCTCTC | 30360 |
| TCTCTCTCTC | TCTCTGTCTG | TCTGTCCGTC | TGTCTGTCTC | GGTCTCTGCG | TCTCGTATC | 30420 |
| TCCCGCCCTC | TCTTTTCTTG | CAAAAGAAGC | TCAAGTACAT | CTAATCTAAT | CCCTTACCAA | 30480 |
| GGCCTGAATT | CTTCACTTCT | GACATCCCAG | ATTTGATCTC | CCTACAGAAT | GCTGTACAGA | 30540 |
| ACTGGCGAGT | TGATTTCTGG | ACTTGGATAC | CTCATAGAAA | CTACATATGA | ATAAAGATCC | 30600 |
| AATCCTAAAA | TCTGGGGTGG | CTTCTCCCTC | GACTGTCTCG | AAAAATCGTA | CCTCTGTTCC | 30660 |
| CCTAGGATGC | CGGAAGAGTT | TTCTCAATGT | GCATCTGCC | GTGTCCTAAG | TGATCTGTGA | 30720 |

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| CCGAGCCCTG | TCCTCTCTGT | CTCAAATATG | TACGTGCAAA | CACCTCTCTC | CATTTCCACA | 30780 |
| ACTACCCACG | GCCCTTGTG | GAACCACTGG | CTCTTTGAAA | AAAATCCCAG | AAGTGGTTT | 30840 |
| GGCTTTTTGG | CTAGGAGGCC | TAAGCCTGCT | GAGAACTTTC | CTGCCCAGGA | TCCTCGGGAC | 30900 |
| CATGCTTGTG | AGCGCTGGAT | GAGTCTCTGG | AAGGACGCAC | GGGACTCCGC | AAAGCTGACC | 30950 |
| TGTCACCAAC | AGGTCAAATG | GATACCTCTG | CATTGGCCCC | AGGCCTCCGA | AGTACATCAC | 31020 |
| CGTCACCAAC | CGTCACCGTC | AGCATCCTTG | TGAGCCTGCC | CAAGGCCCGG | CCTCCGGGGA | 31080 |
| GACTCTTGGG | AGCCCCGGCT | TCGTCCGGCTA | AAGTCCAAAG | GGATGGTGAC | TTCCACCCAC | 31140 |
| AAGGTCCCAC | TGAACGGCGA | AGATGTGGAG | CGTAGGTCAG | AGAGGGGACC | AGGAGGGGAG | 31200 |
| ACGTCCCGAC | AGGCGACGAG | TTCCCAAGGC | TCTGGCCACC | CCACCCACGC | CCCACGCCCC | 31260 |
| ACGTCCCGGG | CACCCGCGGG | ACACCGCCGC | TTTATCCCTT | CCTCTGTCCA | CAGCCGGCCC | 31320 |
| CACCCACCA | CGCAACCCAC | GCACACACGC | TGGAGGTTCC | AAAACCACAC | GGTGTGACTA | 31380 |
| GAGCCTGACG | GAGCGAGAGC | CCATTTCACG | AGGTGGGAGG | GGTGGGGGTG | GGGTGGGTTG | 31440 |
| GGGGTTGTGG | GCTCTGTGGC | GAGCCCCGAT | CTCCCTCTTG | GGTGGCTACA | GGCTAGAAAT | 31500 |
| GAATATCGCT | TCTTGGGGGG | AGGGGCTTCC | TTAGGCCATC | ACCGCTTGCG | GGACTACCTC | 31560 |
| TCAAACCCCTC | CCTTGAGGCC | ACAAAATAGA | TCCACCCCA | CCCATCGACG | TTTCCCCCGG | 31620 |
| GTGCTGGATG | TATCCTGTCA | AGAGACCTGA | GCCTGACACC | GTGCAATTAA | ACACCTTGAC | 31680 |
| TGGCTTTTGT | TGTTTGTGTT | TTTCTGAGAT | GGAGTCTTGC | TCTGTCCCCC | AGGCTGGAGT | 31740 |
| GCAGTGGCGT | GATCTCAGCT | CACTGGAACC | TCTGCCTCCT | GGGTTCAAGT | GATTCTCCTG | 31800 |
| TCTCAGCGCC | ACCATGGCCG | GCTCATTGTT | TTTTTTTTTT | TTTTTGGTAG | ACACGGGGTT | 31860 |
| TCACCCTCTT | TCATTGGTTT | TCCTGGGAGA | TTCTAGATTC | GAGCCACACC | TCATTCCCGT | 31920 |
| CCACAGAGAG | ACTTCTTTTT | TTTTTTTTTT | TTTTTAAGCG | CAACGCAACA | TGCTCGCCTT | 31980 |
| ATTTGAGTGG | CTTCCATAT | CATTATAATT | GTGTTATAGA | TGAAGAAACG | GTATTAAACA | 32040 |
| CTGTGCTAAT | GATAGTAAA | GTGAAGACAA | AAGAAAGGCT | ATCTATTTTG | TGGTTAGAAT | 32100 |
| AAAGTTGCTC | AGTATTTAGA | AGCTACCTAA | ATACGTCAGC | ATTTACACTC | TTCTAGTAA | 32160 |
| AAGCTGGCCG | ATCTGAATAA | TCCTCCTTTA | AACAAACACA | ATTTTTGATA | GGGTTAAGAT | 32220 |
| TTTTTTAAGA | ATGCGACTCC | TGCAAAATAG | CTGAACAGAC | GATACACATT | TAAAAAAATA | 32280 |
| ACAACACAAG | GATCAACCAG | ACTTGGGAAA | AAATCGAAAA | CCACACAAGT | CTTATGAAGA | 32340 |
| ACTGAGTTCT | TAAAAATAGGA | CGGAGAACGT | AGCTATCGGA | AGAGAAGGCA | GTATTGGCAA | 32400 |
| GTTGATTGTT | ACGTTGGTCA | GCAGTAGCTG | GCATATCTTT | TTTGGCCATC | TTTCGGGGCA | 32460 |
| TGTAACACT | ACAGCAAAAT | GAGATATGAT | CCATTAAACA | ACATATTCGC | AAATCAAAAA | 32520 |
| TGTTTTCAGT | AATATAATGC | TTTCAATTTA | GAAGCAAAATC | AAATGATAGA | ACTCCACTGC | 32580 |
| TGTAATAAGT | CACCCCAAAG | ATCACCGTAT | CTGACAAAAT | AACTACCACA | GGGTTATGAC | 32640 |
| TTCAGAATCA | TACTTTCTTC | TTGATATTTA | CTTATGTATT | TATTTTTTTT | AATTTATTTT | 32700 |
| TCTTGAGACG | CGTCTCGCTC | TGTCGCCCCG | GCTGGAGTGC | GATGGTGTGA | TCTCGGCTCA | 32760 |
| CTGCAACCGC | CACCTCCCTG | GGTTCAAGCG | ATTCTCCTGC | CTCAGCCTCC | CGAGTAGCTG | 32820 |
| GGACTACAGG | TGCCCGCCAC | CACGCCCAGC | TAATCTTTAT | ACTTTTAATA | GAGACGGGGT | 32880 |
| TTCACCGTGT | CGGCCCGGAT | GGTCTCGATC | TCTTGACCTC | GTGACCCGCC | CGCCTCGGCC | 32940 |
| TCCCAAAGTG | CTGGGATGAC | AGGCGTGAGC | CACGAGCCCC | GGCCTTCTCT | TGACGTTTAA | 33000 |
| ACTATGAAGT | CAGTCCAGAG | AAACGCAATA | AATGTCAACG | GTGAGGATGG | TGTTGAGGCA | 33060 |
| GAAGTAGGAC | CACACTTTTT | CCTATCTTAT | TCAGTTGATA | ACAATATGAC | CTAGGTAGTA | 33120 |
| ATTTCCCTATG | TGCCCTACTTA | TACACGAGTA | CAAAAGAGTA | AAACAGAGAG | ACTGCTAAAT | 33180 |
| TAAAGGGTAC | GTGAAGTTCT | TCATAGTAAC | TCCGTAAGCT | GGAACACTGT | CAAAAAGCAG | 33240 |
| CAGCTAGTGA | ATTGTTTCCA | TGTATTTTTT | TATTATCCAA | TAAGTGAAC | ATGCTATTCC | 33300 |
| TTTCCAGTCT | CCCAAGCACT | TCTTGTCCCC | ATCACCACTT | CGGTGCTCGA | AGAAAAAGTA | 33360 |
| AGCAAATCAA | GGAACACAAG | CTAAAGAAAC | ACACACACAA | ACCAAAGACA | ACTACAGCGT | 33420 |
| CTGCAAAAGT | TGCTAGAAAG | ACTGAAACTG | TTGAGTATAA | GGATCTGGTA | TTCTACGATC | 33480 |
| ATGAGTTCAC | TTCAGAGTTT | GTTCAAGACA | TACGTTTTCT | AAGGAAACAT | CTTAGTTAGA | 33540 |
| AGTTATTACG | CAGTAGGTAC | CATCCCTAAG | TATTTTTTAC | CAAATCCGTG | ACAATAAAGA | 33600 |
| GCTATCTAAC | CAGAAAAATT | AGCGAGTACG | GGCACCATCC | ATAGGGCTTT | GTCTTTACGC | 33660 |
| TTCATTAGCA | CTTACCATGC | CTTACAATGT | CTAGGATTGA | CCCTGATAGC | ATTTGAAAAA | 33720 |
| CAAGCTAATG | CTTTGTCCAG | AAGACAATC | TTCTCTGGAA | ACGCCCTAAT | GCGCTATAGG | 33780 |
| CATAAGCATC | ATTTGGATCC | ACTTCGAGAG | TCTCTGGGAA | GAATTGAATC | GCAATATCGT | 33840 |
| GTTCCCGTTT | GCAGACCGAA | ACAGTTTCCC | TGCAGCACAC | CAGGCCTCTG | GCTGGCGAAT | 33900 |
| TTTTATCCAT | GTCTGTGAAG | TCTTTGGACA | GAACGAAAG | AGCAACCTCT | TTCGGAGGAT | 33960 |
| GCCAAAGTGT | TGTAGAGTAG | ATCTCCATGC | CTTCGACTCT | GTAATTCTCA | ATCCTCCTAA | 34020 |
| CCTCTGAGAA | TTGTCTTTCA | GCTTGCGTGG | ACTCTGAAAG | TTTACAATAG | GCCNTTTCGG | 34080 |
| ATTTGGCACA | GTACCCAACC | GGTATTGCAG | TGGTGAGAAG | CTAGATGGCT | CAAGATGCTG | 34140 |
| ATAGCTTCTT | TGCCGTGGTA | AGAACACAAA | GCTAAATAAC | CTTTCCCCCT | TTCACGAAGA | 34200 |
| AGGCTCATCA | AGCCTTCCGC | TGCTGCTTTT | TGTAGATTAA | AAGCCTGAAT | CTGAGGCGCG | 34260 |
| ATTGCGGCTA | TTTTCCCTTC | TGAAATGACG | GAAGAGTCCA | ATTTTGTGAC | TTCCAGGCTA | 34320 |
| TCATTATGTT | TCGGTGGAGT | TATTGCTCCT | TATTAGTTT | TACTTTTGGT | TCTTCTGTTT | 34380 |
| GGGATTTTAG | GTGGAAACTT | CATTTTTAAT | TTTCTCCTAA | TTCTCCTCGG | TTGTGGAGCT | 34440 |
| GTCACTAGTC | AAGAGTCGTG | AATTTCTTCG | AGGNCGGTGC | ATTTGGGGGA | GATGCCATAG | 34500 |
| TGGGGCTCAA | TACCTGAGGT | GTTGCCCTTG | TCGGCGGACC | AGAAGTTTGT | GTTTTTGCAA | 34560 |
| GGACTGGAGT | TACCTTTCGG | CTCTTTCCCC | TCTGCGAGAA | GACAGACGGT | GTTCCGGTTT | 34620 |

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| GGCCGATTCT | GGCAACAGGC | TTTTCTGAAG | GGGCTCCGGT | GGATGGCAGC | TCAGTGACAG | 34680 |
| ACGGTGTCTC | ATACCAAGTG | AGTTTTGTCA | ATAGGCTCCG | TCTCCGGGAC | TTCGGGTTTC | 34740 |
| TAATGGCAAA | ATGCCAACAC | TTGGGGTTAA | TGGAATAACA | GCTGCTGGTC | CTCCTAATAA | 34800 |
| ACTTCGACCA | GTTTTTGGTT | TATGTTGAAC | CTGTTTAGAT | CATATGGAAG | TTCCTGTTC | 34860 |
| CAGTGGGACA | GTATCAGGTG | AAAGGACAGC | TGAATCGATA | GAAGACACTG | GGGAGTCTGT | 34920 |
| ATTCAAGGAG | TACTTTGAAT | TGGAAGATTC | TAAATTCCAT | CCGTTTCATT | CGACGGTGTG | 34980 |
| CTGGGTTGTT | TCCGTAAGAA | CGGTCTCGGG | CTGTCTGTGA | CATAAACTAG | GACGAGGTCC | 35040 |
| AAGTGTGTGT | GCGCAACACT | TGGACAGGCA | GTTGCTAAAG | CTCTCTAGAG | AGGTGAATCA | 35100 |
| AAATGTTTTG | TCAGGATCTG | GCTTTTCCCC | CCTATTTTAC | ATCATGATTC | AAAGGGACAC | 35160 |
| CAGAGGAAAG | GATTTTCAACG | AAGGCTCTTT | TGGTCACATT | CTGATCCTTT | GGTAAGCCGA | 35220 |
| TCTGTCTTGC | AATATACATG | TCCCGACGAT | GGAAGGGGAA | AGCGAGCTGA | ATCACCACAA | 35280 |
| TCAGGAACGA | TAATATCATC | GTGGCTTTTC | TGCTTATGAA | ACACTCCACC | CGATAAGATT | 35340 |
| TGATCCCTTT | CTGCAAGCTT | GCTGAGATCA | ACACAACATT | TCGCAAGCAG | GCATTTGCAT | 35400 |
| TGCGGGGTAG | TACAACGTG | TCCTTTCAAG | AGTCTATATG | TTTTATAGGC | CTTTCTGTAG | 35460 |
| CGGTAAGAAC | AGGTGCGCCAG | TAAGAACAAG | GCTTCTTCTG | AGTGTACTTC | TGCATAAAGG | 35520 |
| CGTTCTGCGG | GGGAAACCGC | ATCTCGGTAG | GCATAGTGGT | TTAGTGCTTG | CCATATAGCA | 35580 |
| GCCTGGACGG | GTCCCTGCAG | CACCGCCATC | CTCGAGGCTC | AGGCCCACTT | TCTGCAAGTC | 35640 |
| CACAGGCACC | CCCCCCCCCC | CATAGCGGCT | CCGGCCCGGC | CAGCCCCGGC | TCATTTAAAG | 35700 |
| GCACCAAGCG | CGGTTACCGG | GGGATGGGGG | AGTCCGAGAC | AGAATGACTT | CTTTATCCTG | 35760 |
| CTGACTCTGG | AAAGCCCCGG | GCCTTGTGAT | CCATTGCAAA | CCGAGAGTCA | CCTCGTGTTC | 35820 |
| AGAACACGGA | TCCACTCCCA | AGTTCAGTGG | GGGGATGTGA | GGGGTGTGGC | AGGTAGGACG | 35880 |
| AAGGACTCTC | TTCTTCTCTG | TTCTGCTCTG | ACAGTGGGGC | CTAGGGCTGG | AGCTCTCTCC | 35940 |
| GTGAGACCCG | CTGACTCCCT | CTACCTTGGG | TTCTCTGGGC | CCCACCTTGG | AACGCCGGGC | 36000 |
| CTTGGCAGAT | TCTGGCCCTT | TCTGGCCCTT | CAGTCGCTGT | CAGAAACCCC | ATCTCATGCT | 36060 |
| CGGATGCCCC | GAGTGACTGT | GGCTCGCACC | TCTCCGGAAA | CATTGGAAAT | CTCTCCTCTA | 36120 |
| CGCGCGGCCA | CCTGAAACCA | CAGGAGCTCG | GGACACACGT | GCTTTCGGGA | GAGAATGCTG | 36180 |
| AGAGTCTCTC | CCCGACTCTC | TCTTGACTTG | AGTCTTCTGT | GGGTGCGTGG | TTAAGACGTA | 36240 |
| GTGAGACCAG | ATGTATTAAC | TCAGGCCGGG | TGCTGGTGGC | TCACGCCTGT | AACCCCAACA | 36300 |
| CTTTGGGAGG | CCGAGGCCGT | AGGATCCCTC | GAGGAATCGC | CTAACCCCTG | GGAGGTTGAG | 36360 |
| GTTGCAGTGA | GTGAGCCATA | GTTGTGTGAC | TGTGCTCCAG | TCTGGGCGAA | AGACAGAATG | 36420 |
| AGGCCCTGCC | ACAGGCAGGC | AGGCAGGCAG | GCAGGCAGAA | AGACAACAGC | TGTATTATGT | 36480 |
| TCTTCTCAGG | GTAGGAAGCA | AAAATAACAG | AATACAGCAC | TTAATTAATT | TTTTTTTTTT | 36540 |
| CCTTCGGACG | GAGTTTCACT | CTTGGTGGCC | ACGCTGGAGT | GCAGTGGCAC | CATCTCGGCT | 36600 |
| CACCGCAACC | TCCACCTCCC | GCGTTCAAGC | GATTCTCCTG | CCTCAGCCTC | CTGAGTAGCT | 36660 |
| GGGATTACAG | GGAGGAGCCA | CCACACCCAG | CTGATTTTGT | ATTGTTAGTA | GAGACGGCAT | 36720 |
| TTCTCCATGT | GGGTACAGGT | GGTCTCGAAC | TGGCGACCCC | AGTGGATCTG | CCCCCCCCCG | 36780 |
| CCTCCCAAAG | TGCTGGGGTG | ACAGGCGTGA | GCCATCGTGA | CTGGCCGGCT | ACGTTTATTT | 36840 |
| ATTTATTTTT | TTAATTATTT | TACTTTTTTT | TAGTTTTCCA | TTTTAATCTA | TTTATTTATT | 36900 |
| TACATTTATT | TATTTATTTA | TTTATTTACT | TATTTATTTA | TTTTCGAGAC | AGACTCTCGC | 36960 |
| TCTGCTGCCC | AGGCTGGAGT | GCAGCGGCGT | GATCTCGGCT | CACTGCAACG | TCCGCCTCCC | 37020 |
| GGGTTACACG | CATTCTCCTG | CCTCAGCCTC | CCAAGTAGCT | GGGACTACAG | GCGCCCGCCA | 37080 |
| CCGTGCCCGG | CTAACTTTTT | GTATTTTGAG | TAGAGATGGG | GTTTCACTGT | GGTAGCCAGG | 37140 |
| ATGGTCTCGA | TCTCCTGACC | CCGTGATCCG | TCCACCTCGG | CCTCCCAAAG | TGCTGGGATG | 37200 |
| ACAGGCGTGA | GCCACCGGCC | CCGGCCTATT | TATCTATTTA | TTAACTTTGA | GTCCAGGTTA | 37260 |
| TGAAACCAGT | TAGTTTTTGT | AATTTTTTTT | TTTTTTTTTT | TTTTTTGAGA | CGAGGTTTCA | 37320 |
| CCGTGTTGCC | AAGGCTTGGA | CCGAGGGATC | CACCGGCCCT | CGGCCTCCCA | AAAGTCCGGG | 37380 |
| GATGACAGGC | GCGAGCCTAC | CGCGCCCGGA | CCCCCCTTTT | CCCCTTCCCC | CGCTTGCTTT | 37440 |
| CCCGACAGAC | AGTTTACCGG | CAGAGCGTTT | GGCTGGCGTG | CTTAAACTCA | TTCTAAATAG | 37500 |
| AAATTTGGGA | CGTCAGCTTC | TGGCCTCACG | GACTCTGAGC | CGAGGAGTCC | CCTGGTCTGT | 37560 |
| CTATCACAGG | ACCGTACACG | TAAGGAGGAG | AAAAATCGTA | ACGTTCAAAG | TCAGTCATTT | 37620 |
| TGTGATACAG | AAATACACGG | ATTCACCCAA | AACACAGAAA | CCAGTCTTTT | AGAAATGGCC | 37680 |
| TTAGCCCTGG | TGTCCGTGCC | AGTGATTCTT | TTCCGTTTGG | ACCTTGACTG | AGAGGATTCC | 37740 |
| CAGTCGGTCT | CTCGTCTCTG | GACGGAAGTT | CCAGATGATC | CGATGGGTGG | GGGACTTAGG | 37800 |
| CTGCGTCCCC | CCAGGAGCCC | TGGTTCGATTA | GTTGTGGGGA | TCGCCTTGGA | GGGCGCGGTG | 37860 |
| ACCCACTGTG | CTGTGGGAGC | CTCCATCCTT | CCCCCACCCC | CCTCCCCAGG | GGGATCCCAA | 37920 |
| TTCATTTCCG | GCTGACACGG | TCACTGGCAG | GCGTCCGGCA | TCACCTAGCG | GTCATGTTTA | 37980 |
| CTCTGAAAAC | GGAGGCCTCA | CAGAGGAAGG | GAGCACCAGG | CCGCCTGCGC | ACAGCCTGGG | 38040 |
| GCAACTGTGT | CTTCTCCACC | GCCCCGCCCC | CCACCTCCAA | GTTCTCTCCT | CCCTTGTTGC | 38100 |
| CTAGGAAATC | GCCACTTTGA | CGACCGGGTC | TGATTGACCT | TTGATCAGGC | AAAAACGAAC | 38160 |
| AAACAGATAA | ATAAATAAAA | TAACACAAAA | GTAACATACT | AAATAAAATA | AGTCAATACA | 38220 |
| ACCCATTACA | ATAAATAAAG | ATACGATACG | ATAGGATGCG | ATAGGATACG | ATAGGATACA | 38280 |
| ATACAATAGG | ATACGATACA | ATACAATACA | ATACAATACA | ATACAATACA | ATACAATACA | 38340 |
| ATACAATACA | ATACAATACG | CCGGGCGCGG | TGGCTCATGC | CTGTCATCCC | GTCACCTTGG | 38400 |
| GATGCCGAGG | TGGACGCATC | ACCTGAAGTC | GGGAGTTGGA | GACAAGCCCC | ACCAACATGG | 38460 |
| AGAAATCCCC | TCTCAATTGA | AAATACAAAA | CTAGCCGGGC | GCGGTGGCAC | ATGCCTATAA | 38520 |

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| TCCGAGCTGC | TAGGAAGGCT | GAGGCAGGAG | AATCGCTTGA | ACCTGGGAAG | CGGAGGTTGC | 38580 |
| AGTGAGCCGA | GATTGCGCCA | TCCGACTCCA | GTCTGAGCAA | CAAGAGCGAA | ACTCCGTCTC | 38640 |
| AAAAATAAAT | ACATAAATAA | ATACATAACAT | ACATACATAC | ATACATACAT | ACATACATAC | 38700 |
| ATAAATTTAA | ATAAATAAAT | AAAAATAAAT | AAATAAATGG | GCCCTGCGCG | GTGCTCAAG | 38760 |
| CCTGTCATCC | CCTCACITTTG | GGAGGCCAAG | GCCGCTGGAT | CAAGAGGCGG | TCAGACCAAC | 38820 |
| AGGGCCAGTA | TGGTGAAACC | CCGTCTCTAC | TCACAATACA | CAACATTAGC | CGGCGCTGT | 38880 |
| GCTGTGCTGT | ACTGTCTGTA | ATCCCAGCTA | CTCGGGAGGC | CGAGCTGAGG | CAGGAGAATC | 38940 |
| GCTTGAACCT | GGGAGGCGGA | GTTTGCAGTG | AGCCGAGATC | GCGCCACTGC | AACCCAGCCT | 39000 |
| GGGCGACAGA | GCGAGACTCC | GTCTCCAAAA | AATGAAAATG | AAAATGAAAC | GCAACAAAAAT | 39060 |
| AATTAATAAAG | TGAGTTTCTG | GGGAAAAAGA | AGAAAAGAAA | AAAGAAAAAA | ACAACAAAAAC | 39120 |
| AGAACAACCC | CACCGTGACA | TACACGTACG | CTTCTCGCCT | TTCGAGGCCT | CAAAACACGTT | 39180 |
| AGGAATTATG | CGTGATTTCT | TTTTTTAACT | TCATTTTATG | TTATTATCAT | GATTGATGTT | 39240 |
| TCGAGACGGA | GTCTCGGAGG | CCCGCCCTCC | CTGGTTGCCC | AGACAACCCC | GGGAGACAGA | 39300 |
| CCCTGGCTGG | GCCCGATTGT | TCTTCTCCTT | GGTCAGGGGT | TTCCTTGTCT | TTCTTCGTGT | 39360 |
| CTTTAACCCG | CGTGGACTCT | TCCGCCTCGG | GTTTGCAGAG | TGGCAGCTCC | ACTTTAGGCC | 39420 |
| TTGTTGTTGT | TGGGGACTTT | CCTGATTCTC | CCCAGATGTA | GTGAAAGCAG | GTAGATTGCC | 39480 |
| TTGCCCTGGCC | TTGCCCTGGCC | TTGCCCTTTT | TTTTCTTTCT | TCTTTCTTTA | TTACTTTCTC | 39540 |
| TTTTCTTTCT | TCTTCTTTCT | CTTTTTTTTG | AGACAGAGTT | TCACTCTTGT | TGCCCAGGCT | 39600 |
| AGAGGGCAAT | GGCGCATCT | CGGCTCACCG | CACCCTCCGC | CTCCAGGTT | CAAGCGATTC | 39660 |
| TCCTGCCTCA | GCCTCCTGAT | TAGCTGGGAT | TACAGGCATG | GGCCACCGTG | CTGGCTGATG | 39720 |
| TTTGTACTTT | TAGTAGAGAC | GGTGTTTTTT | CATGTTGGTC | AGGCTGGTCT | CCCACTCCCA | 39780 |
| ACCTCAGGTG | CTCCGCTGCG | CTTAGCCTCG | CAAAGTGCTG | GGATGACAGG | CGTGCAACCG | 39840 |
| CGCCAGCCT | CTCTCTCTCT | CTCTCTCTCT | CTCGCTCGCT | TGCTTGCTTG | CTTTCGTGCT | 39900 |
| TTCTTGCTTT | CCCGTTTTCT | TGCTTTCTTT | CTTTCTTTCT | TTTCTTTCAT | GCTTGCTTTT | 39960 |
| TTGCTTGCTT | GCTTGCTTTT | GTGCTTTCTT | GCTTTCTCTG | TTTCTTTCTT | TCTTTCTTTT | 40020 |
| TTTCTTTCTT | TTGTTTCTTT | CTTGCTTGCT | TTCTTGCTTG | CTTGCTTGCT | TTGCTTGCTT | 40080 |
| CTTGCTTTCC | TGTTTTCTTT | CTTTCTTTCT | TTCTTTCTTT | TTCTTTCTTT | TGCTTTCTTT | 40140 |
| GCTTGCTTGC | TTTCGTGCTT | TCTTGTTTTT | TCGATTTCTT | TCTTTCTTTT | GTTTCTTTCC | 40200 |
| TGCTTGCTTT | CTTGCTTGCT | TGCTTTCTGT | CTTCTTGCTT | TCCTGTTTTT | TTTCTTTCTT | 40260 |
| TCTTTCTTTT | GTTTCTTTCT | TGCTTGCTTT | CTTGCTTGCT | TGCTTTCTGT | CTGCTTGCTT | 40320 |
| TCTCGATTTT | TTTCTTTCTT | TTGTTTCTTT | CCTGCTTGCT | TTCTTGCTTG | ATTGCTTTCT | 40380 |
| TGCTTTCTTG | CTTTCTTGTT | TTCTTTCTTT | CTTTTGTTTT | TTTCTTTCTT | GCTTTCTTGT | 40440 |
| TTTCTTGCTT | TCTTGCTTGC | TTGCTTTCTG | GCTTTCTTGT | TTTCTTGCTT | TCTTTCTTTT | 40500 |
| GTTTCTTTCT | TGCTTGCTTT | CTTGCTTTCT | TGTTTTCTTG | CTTTCTTGCT | TGCTTGCTTT | 40560 |
| CGTGCTTTCT | TTCTTGCTTT | CTTTTCTTTT | TTTCTTTTCT | TTTCTTTTCT | TTCTTGCTTT | 40620 |
| CTTTTCTTTT | ATCATCATCT | TTCTTTCTTT | CCTTTCTTTT | TTTCTTTTCT | TCTATCTTTT | 40680 |
| TTTCTTTCTT | TCTTTCTTTT | TTCTTTCTTT | TCTTTCTGTT | TCGTCTTTTT | GAGACAGAGT | 40740 |
| TTCACCTCTG | TTTCCACGGC | TAGAGTGCAA | TGGCGCGATC | TTGGCTCACC | GCACCTTCCG | 40800 |
| CCTCCCGGGT | TCGAGCGCTT | CTCCTGCCTC | CAGCCTCCCG | ATTAGCGGGG | ATTGACAGGG | 40860 |
| AGGCACCCCC | ACGCCTGGCT | TGGCTGATGT | TTGTGTTTTT | AGTAGGCACG | CCGTGCTCTC | 40920 |
| CCATGTTGCT | CAGGCTGGTC | TCCAACCTCC | GACCTCCTGT | GATGCGCCCA | CCTCGGCTCT | 40980 |
| TCGAAGTGCT | GGGATGACGG | GCGTGACGAC | CGTGCCCGGC | CTGTTGACTC | ATTTCGCTTT | 41040 |
| TTTATTTCTT | TCGTTTCCAC | GCGTTTACTT | ATATGTATTA | ATGTAAACGT | TTCTGTACGC | 41100 |
| TTATATGCAA | ACAACGACAA | CGTGTATCTC | TGCATTGAAT | ACTCTTGCGT | ATGGTAAATA | 41160 |
| CGTATCGGTT | GTATGGAAAT | AGACTTCTGT | ATGATAGATG | TAGGTGTCTG | TGTTATACAA | 41220 |
| ATAAATACAC | ATCGCTCTAT | AAAGAAGGGA | TCGTGAGATA | AGACGTTTAT | TTTACGTATG | 41280 |
| AAAAGCGTCG | TATTTATGTG | TGTAAATGAA | CCGAGCGTAC | GTAGTTATCT | CTGTTTTCTT | 41340 |
| TCTTCTCTCT | CTTCGTGTTT | TTCTTCTTCT | CTTTCTTCTT | TTCTCTCTCT | CTTTAGGTTT | 41400 |
| TTCTTCTCTT | CTTCTTTTCC | TTCTTTCTCT | CTTTCTGTCC | TTTTTTCTCT | CGTGCTTTAT | 41460 |
| TTCTTCTTCT | TTCCCTGTGT | TTCTTTCTTT | TTCTTTCTCT | CTCTGTTTCT | TTTTCCCTTC | 41520 |
| TTTCTTCTGT | TTCTTTCTCT | ATTCTTTCTT | TCTTTTCTGT | TGTTTCTTTC | CTTCCCGTCT | 41580 |
| GTCTTTTAAA | AAATTTGGAGT | GTTTCAGAAG | TTTACTTTGT | GTATCTACGT | TTTCTAAATT | 41640 |
| GTCTCTCTTT | TCTCCATTTT | CTTCTCTCCT | CCCTCCCTCC | CTCCCTGCTC | CCTTCCCTCC | 41700 |
| CTCCTTCCCT | TTCCGCACTT | GTCTCTTTTC | CCCACTCCCC | TCCCCCGCTC | TGTCTCTGCG | 41760 |
| TGGATTCCGG | AAGAGCCTAC | CGATTCTGCC | TCTCCCTGTC | TCTGCAGCGA | CCCCCGGACC | 41820 |
| GAGTCCTTGT | GTGTTCTTTT | TCCCTCCCTC | CCTCCCTGCC | TCCCTCCCTC | CCTCCCTGCT | 41880 |
| TCCGAGAGGC | ATCTCCAGAG | ACCGCGCCGT | GGGTTGTCTT | CTGACTCTGT | CGCGGTCGAG | 41940 |
| GCAGAGACGC | GTTTTGGGCA | CCGTTTGTGT | GGGGTTGGGG | CAGAGGGGCT | GCGTTTTTCG | 42000 |
| CCTCGGGAAG | AGCTTCTCGA | CTCACGGTTT | CGCTTTTCGG | GTCCACGGGC | CGCCCTGCCA | 42060 |
| GCCGGATCTG | TCTCGCTGAC | GTCCGCGGCG | GTTGTGCGGC | TCCATCTGGC | GGCCGCTTTG | 42120 |
| AGATCGTGCT | CTCGGCTTCC | GGAGCTGCGG | TGGACGTGTC | CGAGGGAGGG | GACCGTCCCC | 42180 |
| GCTGTGAGCT | AGGCAGAGCT | CCGGAAGGCC | CGCGGTCGTC | AGCCCGGCTG | GCCCGGTGGC | 42240 |
| GCCAGAGCTG | TGGCCGGTCG | CTTGTGAGTC | ACAGCTCTGG | CGTGCAAGGT | TATGTGGGGG | 42300 |
| AGAGGCTGTC | GCTGCGCTTC | TGGGCCCGCG | GCGGGCGTGG | GGCTGCCCCG | GCCCGTCCGAC | 42360 |
| CAGCGCGCCG | TAGCTCCCGA | GGCCCGAGCC | GCGACCCGGC | GGACCCCGCG | CGCGTGCGCG | 42420 |

| | | | | | | |
|------------|------------|------------|------------|------------|------------|-------|
| AGGCTGGGGA | CGTCTTCCG | GGCCCGGTG | CGGTCCGCTC | ATCCTGGGCG | TCTGAGGCGG | 42480 |
| CGGCCGAATT | CGTTTCCGAG | ATCCCCGTGG | GGAGCCGGGG | ACCTGTCGGG | CCCCGTCCCG | 42540 |
| CGGCTGCGCG | GGAGCGGTCC | CCGGCCCGGG | CCGCGGTCCC | TCTGCGCGGA | TCTTTCTTGG | 42600 |
| CGAGTCCCCG | TGSCCAGTCC | GAGAGCGCTC | CCTGAGCCGG | TGCGGCCCCA | GAGGTCCGGC | 42660 |
| TGGCCCGGCT | TGGTCCCTTC | GTGTGTCCCG | GTGCTAGGAG | GGGCCCGGCG | AAAATGCTTC | 42720 |
| CGGCTCCCCG | TCTGGAGACA | CGGGCCGGCC | CCTGCGTGTG | GCCAGGGGCG | CCGGGAGGGC | 42780 |
| TCCCCGGCCC | GGCGTGTCC | CCGCGTGTGT | CCTTGGGTTG | ACCAAGAGGA | CCCCGGGCGC | 42840 |
| TCCGTGTGTG | GCTGCGATGG | TGGCGTTTTT | GGGGACAGGT | GTCCGTGTCC | GTGTCCGCGG | 42900 |
| TCGCCTGGGC | CGGCGGCGTG | GTGCGTGACG | CGACCTCCCG | GCCCCCGGGG | AGGTATATCT | 42960 |
| TTGCTCCGA | GTGCGCAATT | TGGGCCGCG | GGGTTATAT | | | 42999 |

(2) INFORMATION FOR SEQ ID NO:18:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 175 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Genomic DNA

(iii) HYPOTHETICAL: NO

(iv) ANTISENSE: NO

(v) FRAGMENT TYPE:

(vi) ORIGINAL SOURCE:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:18:

| | | | | | | |
|------------|------------|------------|------------|------------|------------|-----|
| CTCCCGCGCG | GCCCCCGTGT | TCGCCGTTCC | CGTGGCGCGG | ACAATGCGGT | TGTGCGTCCA | 60 |
| CGTGTGCGTG | TCCGTGCAGT | GCCGTTGTGG | AGTGCCTCGC | TCTCCTCCTC | CTCCCCGSCA | 120 |
| GCGTTCCAC | GGTTGGGGAC | CACCGGTGAC | CTCGCCCTCT | TGGGGCCTGG | ATCCG | 175 |

(2) INFORMATION FOR SEQ ID NO:19:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 755 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Genomic DNA

(iii) HYPOTHETICAL: NO

(iv) ANTISENSE: NO

(v) FRAGMENT TYPE:

(vi) ORIGINAL SOURCE:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:19:

| | | | | | | |
|------------|------------|------------|------------|------------|-------------|-----|
| GGTCTGGTGG | GAATTGTTGA | CCTCGCTCTC | GGGTGCGGCC | TTTGGGGAAC | GGCGGGGTCTG | 60 |
| GTCGTGCCCG | GCGCCGGACG | TGTGTGCGGG | CCCACTTCCC | GCTCGAGGGT | GGCGGTGGCG | 120 |
| GCGGCGTTGG | TAGTCTCCCG | TGTTGCGTCT | TCCCGGGCTC | TTGGGGGGGG | TGCCGTGCTT | 180 |
| TTCGGGGCCG | GCGTTGCTTG | GCTTACGCAG | GCTTGGTTTG | GGACTGCCTC | AGGAGTCGTG | 240 |
| GGCGGTGTGA | TTCCCGCCCG | TTTTGCCTCG | CGTCTGCCTG | CTTTGCCTCG | GGTTTGCTTG | 300 |
| GTTCTGTCT | CGGGAGCGGT | GGTTTTTTTT | TTTTTCGGGT | CCCGGGGAGA | GGGGTTTTTC | 360 |
| CGGGGGACGT | TCCCGTCCGC | CCCTGCCGCC | GGTGGGTTTT | CGTTTCGGGC | TGTGTTTCGTT | 420 |
| TCCCTTTCCC | CGTTTCGCCG | TCGGTTCTCC | CCGGTCGGTC | GGCCCTCTCC | CCGGTCGGTC | 480 |
| GCCCGGCCGT | GCTTCCGGAC | CCCCCTTCT | GGGGGGGATG | CCCGGGCACG | CACGCGTCCG | 540 |
| GGCGGCCACT | GTGGTCCGGG | AGCTGCTCGG | CAGGCGGGTG | AGCCAGTTGG | AGGGGCGTCA | 600 |
| TGCCCCCGCG | GGCTCCCGTG | GCCGACGCGG | CGTGTTCTTT | GGGGGGGCCT | GTGCGTGCGG | 660 |
| GAAGGCTGCG | CACGTTGTCT | GTCCTTGCGA | GGGAAAGAGG | CTTTTTTTTT | TTAGGGGGTG | 720 |
| GTCCTTCGTC | GTCCGTCGCG | CGGTGATCC | GGCCT | | | 755 |

(2) INFORMATION FOR SEQ ID NO:20:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 463 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Genomic DNA
 (iii) HYPOTHETICAL: NO
 (iv) ANTISENSE: NO
 (v) FRAGMENT TYPE:
 (vi) ORIGINAL SOURCE:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:20:

| | | | | | | |
|------------|-------------|------------|------------|-------------|------------|-----|
| GGCCGAGGTG | CGTCTGCGGG | TTGGGGCTCG | TCCGGCCCCG | TCGTCTCCG | GGAAGGCGTT | 60 |
| TAGCGGGTAC | CGTCGCCCGC | CCGAGGTGGG | CGCACGTCCG | TGAGATAACC | CCGAGCGTGT | 120 |
| TTCTGGTTGT | TGGCGGCGGG | GGCTCCGGTC | GATGTCTTCC | CCTCCCCCTC | TCCCCGAGGC | 180 |
| CAGGTCAGCC | TCCGCCTGTG | GGCTTCGTCT | GCCGTCTCCC | CCCCCTCAC | GTCCCTCGCG | 240 |
| AGCGAGCCCG | TCCGTTTCGAC | CTTCCTTCCG | CCTTCCCCCC | ATCTTTCCGC | GCTCCGTTGG | 300 |
| CCCCGGGGTT | TTCACGGCGC | CCCCACGCT | CCTCCGCCTC | TCCGCCCCGTG | GTTTGACGCG | 360 |
| CTGGTTCCGG | TCTCCCCGCC | AAACCCCGGT | TGGGTTGGTC | TCCGGCCCCG | GCTTGCTCTT | 420 |
| CGGGTCTCCC | AACCCCGGCG | CGGAAGGGTT | CGGGGGTTCC | GGG | | 463 |

(2) INFORMATION FOR SEQ ID NO:21:

(i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 378 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Genomic DNA
 (iii) HYPOTHETICAL: NO
 (iv) ANTISENSE: NO
 (v) FRAGMENT TYPE:
 (vi) ORIGINAL SOURCE:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:21:

| | | | | | | |
|------------|------------|------------|------------|------------|------------|-----|
| GGATTCTTCA | GGATTGAAAC | CCAAACCGGT | TCAGTTTCTT | TTCCGGCTCC | GGCCGGGGGG | 60 |
| GGCGGCCCCG | GGCGGTTTGG | TGAGTTAGAT | AACCTCGGGC | CGATCGCACG | CCCCCGTGG | 120 |
| CGGCGACGAC | CCATTGGAAC | GTCTGCCCTA | TCAACTTTCG | ATGGTAGTCG | ATGTGCCTAC | 180 |
| CATGGTGACC | ACGGGTGACG | GGGAATCAGG | GTTCGATTCC | GGAGAGGGAG | CCTGAGAAAC | 240 |
| GGCTACCACA | TCCAAGGAAG | GCAGCAGGCG | CGCAAATTAC | CCACTCCCGA | CCCGGGGAGG | 300 |
| TAGTGACGAA | AAATAACAAT | ACAGGACTCT | TTCGAGGCCC | TGTAATTGGA | ATGAGTCCAC | 360 |
| TTTAAATCCT | TTAAGCAG | | | | | 378 |

(2) INFORMATION FOR SEQ ID NO:22:

(i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 378 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Genomic DNA
 (iii) HYPOTHETICAL: NO
 (iv) ANTISENSE: NO
 (v) FRAGMENT TYPE:
 (vi) ORIGINAL SOURCE:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:22:

| | | | | | | |
|------------|------------|------------|-------------|------------|------------|-----|
| GATCCATTGG | AGGGCAAGTC | TGGTGCCAGC | AGCCGCGGTA | ATTCCAGCTC | CAATAGCGTA | 60 |
| TATTAAAGTT | GCTGCAGTTA | AAAAGCTCGT | AGTTGGATCT | TGGGAGCGGG | CGGGCGGTCC | 120 |
| GCCGCGAGGC | GAGTCACCGC | CCGTCCCCGC | CCCTTGCCCTC | TGGGCGCCCC | CTCGATGCTC | 180 |

| | | | | | | |
|------------|------------|-------------|------------|------------|------------|-----|
| TTAGCTGAST | TGTCCCGCGG | GGCCCCGAAGC | GTTTACTTTG | AAAAAATTAG | AGTTGTTTCA | 240 |
| AAGCAGGCC | GAGCCGCTG | GATACCGCA | GCTAGGAAAT | AATGGAATAG | GACCGGCTT | 300 |
| CCTATTTTGT | TTGGTTTTCG | GAACGAGCC | CATGATTAA | GGAAACGGCC | GGGGGATTG | 360 |
| CCTTATTGCG | CCCCCCTA | | | | | 378 |

(2) INFORMATION FOR SEQ ID NO:23:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 719 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Genomic DNA

(iii) HYPOTHETICAL: NO

(iv) ANTISENSE: NO

(v) FRAGMENT TYPE:

(vi) ORIGINAL SOURCE:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:23:

| | | | | | | |
|------------|------------|------------|------------|------------|------------|-----|
| GGATCTTTCC | CGCTCCCCGT | TCCTCCCGGC | CCCTCCACCC | GCGCGTCTCC | CCCCTTCTTT | 60 |
| TCCCCTCTCC | GGAGGGGGGG | GAGGTGGGGG | CGCGTGGGCG | GGGTCCGGGG | TGGGGTGGGC | 120 |
| GGGGGACCGC | CCCCGGCCGG | CAAAAGGCCG | CCGCCGGGCG | CACTTCAACC | GTAGCGGTGC | 180 |
| GCCGCGACCG | GCTACGAGAC | GGCTGGGAAG | GCCCCACGGG | GAATGTGGCT | CGGGGGGGGC | 240 |
| GGCGCGTCTC | AGGGCGCGCC | GAACCACCTC | ACCCCGAGTG | TTACAGCCCT | CCGGCCCGCG | 300 |
| TTTCGCGGAA | TCCCGGGGCC | GAGGGGAAGC | CCGATACCCG | TCGCCGCGCT | TTTCCCCTCC | 360 |
| CCCCGTCCGC | CTCCCGGGCG | GGCGTGGGGG | TGGGGGCCCG | GCCGCCCTC | CCACGCCCGT | 420 |
| GGTTTCTCTC | TCTCCCGGTC | TCGGCCGGTT | TGGGGGGGGG | AGCCCGGTTG | GGGGCGGGGC | 480 |
| GGACTGTCCT | CAGTGCGCC | CGGCGTCCG | CGCGCCGTCG | GGCCCGGGGG | GTTCCTCTCG | 540 |
| TCACGCCGCC | CCCGACGAAG | CCGAGCGCAC | GGGGTCGGCG | GCGATGTCGG | CTACCCACCC | 600 |
| GACCCGTCTT | GAAACACGGA | CCAAGGAGTC | TAACGCGTGC | GCGAGTCAGG | GGCTCGCAGC | 660 |
| AAAGCCGCCG | TGCGCAATG | AAGGTGAAGC | GCCCCGTCCG | GGGGCCCGAG | | 720 |

(2) INFORMATION FOR SEQ ID NO:24:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 685 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Genomic DNA

(iii) HYPOTHETICAL: NO

(iv) ANTISENSE: NO

(v) FRAGMENT TYPE:

(vi) ORIGINAL SOURCE:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:24:

| | | | | | | |
|------------|------------|------------|------------|------------|------------|-----|
| CGAGGCCTCT | CCAGTCCGCC | GAGGGCGCAC | CACCGGCCCG | TCTCGCCCGC | CGCGTCGGGG | 60 |
| AGGTGGAGCA | CGAGCGTACG | CGTTAGGACC | CGAAAGATGG | TGAACATATG | CTGGGCAGGG | 120 |
| CGAAGCCAGA | GGAAACTCTG | GTGGAGGTCC | GTAGCGGTCC | TGACGTGCAA | ATCGGTCGTC | 180 |
| CGACCTGGGT | ATAGGGGCGA | AAGACTAATC | GAACCATCTA | GTAGCTGGTT | CCCTCCGAAG | 240 |
| TTTCCCTCAG | GATAGCTGGC | GCTCTCGCAA | CCTTCGGAAG | CAGTTTTATC | CGGGTAAAGG | 300 |
| CGGAATGGAT | TAGGAGGTCT | TGGGGCCGGA | AACGATCTCA | AACTATTCT | CAAACTTTAA | 360 |
| ATGGGTAAAG | AAGCCCGGCT | CGCTGGCGTG | GAGCCGGGCG | TGGAATGCGA | GTGCCTAGTG | 420 |
| GGCCACTTTT | GGTAAGCAGA | ACTGGCGCTG | CGGGATGAAC | CGAACGCCGG | GTTAAGGCGC | 480 |
| CCGATGCCGA | CGCTCATCAG | ACCCAGAAAA | AGGTGTTGGT | TGATATAGAC | AGCAGGACGG | 540 |
| TGGCCATGGA | AGTCGGAATC | CGCTAAGGAG | TGTGTAACAA | CTCACCTGCC | GAATCAACTA | 600 |
| GCCCTGAAAA | TGGATGGCGC | TGGAGCGTCG | GGCCCATACC | CGGCCGTCGC | CGGCAGTCGG | 660 |
| AACGGGACGG | GACGGGAGCG | GCCGC | | | | 685 |

(2) INFORMATION FOR SEQ ID NO:25:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 33 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Genomic DNA

(iii) HYPOTHETICAL: NO

(iv) ANTISENSE: NO

(v) FRAGMENT TYPE:

(vi) ORIGINAL SOURCE:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:25:

GAGGAATTCC CCTATCCCTA ATCCAGATTG GTG

33

(2) INFORMATION FOR SEQ ID NO:26:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 35 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Genomic DNA

(iii) HYPOTHETICAL: NO

(iv) ANTISENSE: NO

(v) FRAGMENT TYPE:

(vi) ORIGINAL SOURCE:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:26:

AAACTGCAGG CCGAGCCACC TCTCTTCTGT GTTTG

33

(2) INFORMATION FOR SEQ ID NO:27:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 33 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Genomic DNA

(iii) HYPOTHETICAL: NO

(iv) ANTISENSE: NO

(v) FRAGMENT TYPE:

(vi) ORIGINAL SOURCE:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:27:

AGGAATTAC AGAAGAGAGG TGGCTCGGCC TGC

33

(2) INFORMATION FOR SEQ ID NO:28:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 34 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Genomic DNA

(iii) HYPOTHETICAL: NO

(iv) ANTISENSE: NO

(v) FRAGMENT TYPE:

(vi) ORIGINAL SOURCE:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:28:

AGCCTGCAGG AAGTCATACC TGGGGAGGTG GCCC

34

(2) INFORMATION FOR SEQ ID NO:29:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 80 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Genomic DNA

(iii) HYPOTHETICAL: NO

(iv) ANTISENSE: NO

(v) FRAGMENT TYPE:

(vi) ORIGINAL SOURCE:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:29:

AAACTGCAGG TTAATTAACC CTAACCCTAA CCCTAACCCCT AACCCCTAACC CTAACCCTAA
CCCTAACCCCT AACCCGGGAT

60

80

(2) INFORMATION FOR SEQ ID NO:30:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 19 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Genomic DNA

(iii) HYPOTHETICAL: NO

(iv) ANTISENSE: NO

(v) FRAGMENT TYPE:

(vi) ORIGINAL SOURCE:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:30:

TTGGGCCCTA GGCTTAAGG

19

(2) INFORMATION FOR SEQ ID NO:31:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 25 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Genomic DNA

(iii) HYPOTHETICAL: NO

(iv) ANTISENSE: NO

(v) FRAGMENT TYPE:

(vi) ORIGINAL SOURCE:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:31:

GCCAGGGTTT TCCAGTCAC GACGT

25

(2) INFORMATION FOR SEQ ID NO:32:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 26 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Genomic DNA
(iii) HYPOTHETICAL: NO
(iv) ANTISENSE: NO
(v) FRAGMENT TYPE:
(vi) ORIGINAL SOURCE:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:32:

GCTGCAAGGC GATTAAGTTG GGTAAC

26

(2) INFORMATION FOR SEQ ID NO:33:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 26 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Genomic DNA
(iii) HYPOTHETICAL: NO
(iv) ANTISENSE: NO
(v) FRAGMENT TYPE:
(vi) ORIGINAL SOURCE:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:33:

TATGTTGTGT GGAATTGTGA GCGGAT

26

(2) INFORMATION FOR SEQ ID NO:34:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 21 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Genomic DNA
(iii) HYPOTHETICAL: NO
(iv) ANTISENSE: NO
(v) FRAGMENT TYPE:
(vi) ORIGINAL SOURCE:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:34:

GGGTTTAAAC AGATCTCTGC A

21